
# CLASS C
## MOTORHOME
## OWNERS MANUAL

NOTE

Product improvement is a continuing process at Triple E Recreational Vehicles. Thus, we reserve the right to change specifications, operating instructions, standards and options on any and all products without prior notice. Errors and omissions excepted. The diagrams included were current at the time of printing.

# FORWORD

## A WORD TO MOTORHOME OWNERS

Welcome to the growing number of discerning people who own and operate a Triple E Motorhome.

Our company takes great pride in the quality and excellence that the Triple E name represents. We have sought to anticipate your needs and desires with respect to safety, convenience, styling, and engineering.


We appreciate having you as our customer and have provided this manual and various component manuals to introduce you to the many features of your new motorhome. Each person using the motorhome should take time to read this manual before operation. It will help you to better understand the many built-in operational features of this recreation vehicle. Talk to your dealer if you have any questions about your unit.

We hope you will enjoy your new motorhome, and we wish you pleasant and carefree driving.

### IMPORTANT

This vehicle is equipped with the latest systems, appliances and operational equipment making it considerably more complicated than a normal automobile.

The use of three way systems; 120V, 12V and propane needs careful consideration as the availability of energy in both the 12V and propane systems has a limited capacity and volume. Due caution should be applied and in case of doubt, clarification from the authorized Triple E dealer or our factory service department should be obtained. Do not modify the unit in any way. Unauthorized modification may impair the function or life of the vehicle and could lead to an accident.

Modifications that are not approved by Triple E may void the warranty and transfer responsibility for the changes to the owner.

This manual is intended to be a guideline. This manual despite our best efforts should not be considered comprehensive in all details. We invite you to use this manual to help you learn the basics about your vehicle. The component operation will be in the manual for the fridge, stove, etc..

## INFORMATION AND SAFETY

Throughout the manual, certain instructions, procedures and information is emphasized with the words IMPORTANT, CAUTION and WARNING. These key words denote the level of care that each operator should exercise on mechanical and safety items.

# Triple E

# Recreational Vehicles

301 Roblin Blvd., Box 1230
Winkler, Manitoba
Canada R6W 4C4
Tel: (204) 325-4361
Fax: (204) 325-5241

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# 1 INTRODUCTION

Congratulations on your choice of a Triple E built Motorhome for your travelling and touring comfort and enjoyment. It utilizes the latest design features and manufacturing techniques to insure safe, efficient and trouble-free operation at all times.

## 1.1 OPERATOR'S MANUALS

All owners/operators should read, understand and follow all instructions in this the motorhome manual, chassis manual and manuals for all auxiliary systems and appliances. A few minutes spent reading the appropriate manual will pay rich dividends in providing safe, efficient and trouble-free operation. Refer to the chassis manufacturer's operator's Manual for detailed information on the chassis. Refer to the appropriate manual supplied for auxiliary equipment and appliances as required.

This manual covers all the systems, controls and operation unique to this vehicle. Always keep the information kit of manuals and information with the vehicle for easy reference. Pass the kit on to new operators or owners as appropriate for their information as well. Use the Table of Contents or Index to find specific information.

If more information is required or you do not understand something, please contact:

Your Triple E dealer or
Triple E Recreational Vehicles
301 Roblin Blvd., Box 1230
Winkler, Manitoba Canada
R6W 4C4
Tel: (204) 325-4361
Fax: (204) 325-5241

Chassis: Ford US 1-800-392-3673
Ford CAN 1-800-565-3673

## 1.2 INFORMATION KIT

An information kit is provided with each vehicle and includes specific information on specific systems, features and appliances including:

1. Chassis
2. Air Conditioning
3. Generator (If equipped)
4. Furnace
5. General Operation
6. Entertainment System
7. Water Heater
8. Safety
9. Flooring and Counter Tops
10. Fridge
11. Plumbing Fixtures
12. Roof and Side Walls
13. Appliances
14. Converter

## 1.3 OPTIONS AND EQUIPMENT

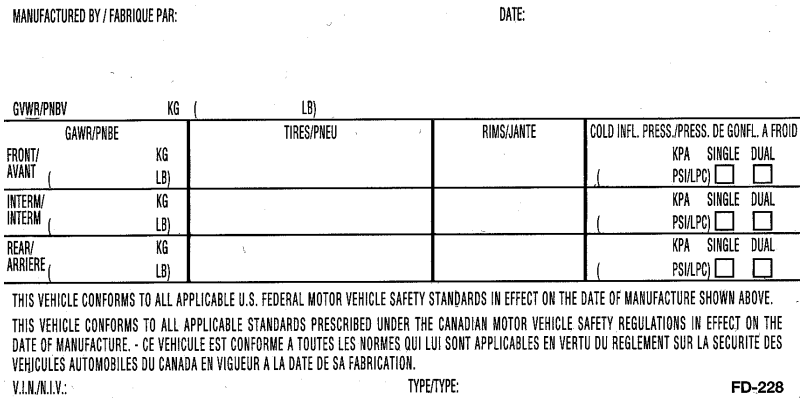
Your motorhome is available in various sizes, models and floor plans. The equipment, accessories and components described in this manual may not necessarily apply to your vehicle. Refer to the material provided in the information kit for the detailed instructions unique to your unit.

## 1.4 KEYS

It is a good idea to keep a record of all key code numbers and keep them in a safe place - not in your vehicle. Use the charts at the front of this manual but make a duplicate copy to be stored elsewhere.

## 1.5 VEHICLE CERTIFICATION LABEL

This label contains vehicle identification and other important reference information. The vehicle certification label is located on the driver's door frame. Never remove or destroy this label.


MANUFACTURED BY / FABRIQUE PAR: DATE:

GVWR/PNBV KG ( LB)

| GAWR/PNBE | | TIRES/PNEU | RIMS/JANTE | COLD INFL. PRESS./PRESS. DE GONFL. A FROID |
|---|---|---|---|---|
| FRONT/ AVANT | KG ( LB) | | | KPA SINGLE DUAL ( PSI/LPC) ☐ ☐ |
| INTERM/ INTERM | KG ( LB) | | | KPA SINGLE DUAL ( PSI/LPC) ☐ ☐ |
| REAR/ ARRIERE | KG ( LB) | | | KPA SINGLE DUAL ( PSI/LPC) ☐ ☐ |

THIS VEHICLE CONFORMS TO ALL APPLICABLE U.S. FEDERAL MOTOR VEHICLE SAFETY STANDARDS IN EFFECT ON THE DATE OF MANUFACTURE SHOWN ABOVE.

THIS VEHICLE CONFORMS TO ALL APPLICABLE STANDARDS PRESCRIBED UNDER THE CANADIAN MOTOR VEHICLE SAFETY REGULATIONS IN EFFECT ON THE DATE OF MANUFACTURE. - CE VEHICULE EST CONFORME A TOUTES LES NORMES QUI LUI SONT APPLICABLES EN VERTU DU REGLEMENT SUR LA SECURITE DES VEHICULES AUTOMOBILES DU CANADA EN VIGUEUR A LA DATE DE SA FABRICATION.

V.I.N./N.I.V.: TYPE/TYPE: FD-228

Fig. 1-1 REFERENCE NUMBER CODE

Reference Number Code:

1. Chassis manufacturer.
2. Chassis manufacture date.
3. Month and year of manufacture at Triple E Recreational Vehicles.

4. Gross Vehicle Weight Rating:
   Total permissible weight of the vehicle, including driver, passengers, total cargo carried (including all liquids) and equipped with all options.

5. Gross Axle Weight Rating:
   Total permissible weight allowed for the front, and rear axles (listed in pounds and kilograms).

6. Suitable Tire Choice:
   Tires recommended to meet handling, loading and safety requirements. When replacing any of the tires, the new tires must meet these specifications.

7. Suitable Rim Choice:
   Wheel rims recommended to meet handling and safety requirements. When replacing any of the rims on the vehicle ensure that the new rims meet these specifications.

8. Cold Inflation Pressure:
   Inflation pressures recommended (while cold) for the tires originally equipped on your vehicle. These pressure levels must be maintained to assure proper handling, safety and fuel economy.

9. Rear Axle Wheel Configuration:
   Single axle/Dual wheels.

10. Serial Number:
    This is the serial number assigned to the completed vehicle by Triple E Recreational Vehicles.

11. Vehicle Identification Number (VIN):
    This number identifies the chassis on which the motorhome is built.

12. Type:
    States the NHTSA designated usage classification for your motorhome. MPV signifies a Multi-purpose Passenger Vehicle.

13. Model:
    Lists the Triple E product model number of your vehicle.

14. Color:
    Signifies the color code number of the decor used throughout the vehicle. This number is necessary for ordering replacement cushions, curtains, carpet, etc. It also is found in the wardrobe.

NOTE

The specifications sheet is located in the wardrobe. Beneath the specification sheet are the exterior color codes.

All Triple E motorhomes are built according to CSA and RVIA standards.

| | |
|---|---|
| CARGO-CARRYING CAPACITY: _____ KG. | CAPACITÉ DE CHARGEMENT: _____ KG. |
| CALCULATED WITH THE FRESH WATER TANKS | CALCULÉE AVEC LES RÉSERVOIRS D'EAU |
| FULL (COLD _____ KG. | DOUCE PLEINS (FROID _____ KG. |
| HOT _____ KG.) | CHAUD _____ KG.) |
| AND THE WASTE WATER TANKS EMPTY | ET LES RÉSERVOIRS D'EAUX USÉES VIDES. |
| WASTE WATER TANKS CAP _____ KG. | CAP DES RÉSERVOIRS D'EAUX USÉES: _____ KG. |

CD-129

U.S.

Fig. 1-2 VEHICLE LABELS

Fig. 1-3 IDENTIFICATION INFORMATION (LABEL LOCATION)

## 1.6 IDENTIFICATION INFORMATION

Take a few minutes to fill in this information. It will be a handy reference for you. (Some appliances may be optional). The label is located on driver's side door frame.

Your Name _____

Motorhome Model _____

Coach Serial No. _____

Chassis Serial No. _____

Date Purchase _____

Dealer Name _____

Address _____

_____

Phone No. _____

Insurance Policy

- Agent Name _____
- Policy No. _____
- Agent's Phone No. _____

Range/Oven

- Manufacturer _____
- Model _____
- Serial No. _____

Microwave Oven

- Manufacturer _____
- Model _____
- Serial No. _____

Video Cassette Player

- Manufacturer _____
- Model _____
- Serial No. _____

Water Heater

- Manufacturer _____
- Model _____
- Serial No. _____

Furnace

- Manufacturer _____
- Model _____
- Serial No. _____

Air Conditioner

- Manufacturer _____
- Model _____
- Serial No. _____

Generator

- Manufacturer _____
- Model _____
- Serial No. _____

Miscellaneous

- Key No. _____
- Digital Door Lock Code _____

Paint Codes

_____

_____

_____

## 1.7 EXTERIOR FEATURE IDENTIFICATION

Composite model shown for illustration purposes only. Actual locations of features depends on coach model and options.

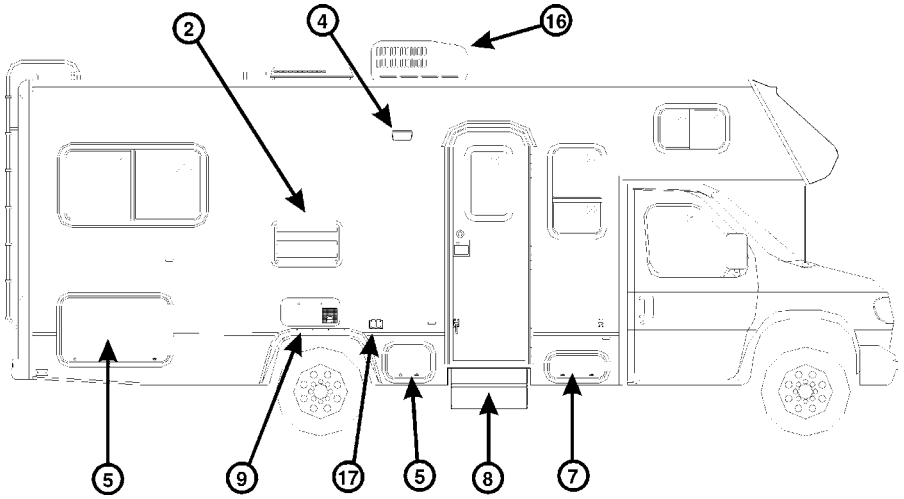



Fig. 1-3 EXTERIOR IDENTIFICATION (RIGHT)

1. Water Heater Service Access.
2. Refrigerator Service Access.
3. Range Hood Vent.
4. Porch Light.
5. Storage Compartment.
6. Spare Tire.
7. Propane Tank.
8. Entrance Step.
9. Furnace Service Access.
10. Fuel Tank Filler.
11. Battery Compartment.
12. Generator Compartment.
13. Holding Tank Drain Valves.
14. Sewer Hose Storage.
15. Shore Power Hookup.
16. Roof Air Conditioner.
17. Exterior 120 Volt Plug in.
18. Exterior Shower.
19. Fresh Water Tank Filler
20. City Water Hook-up

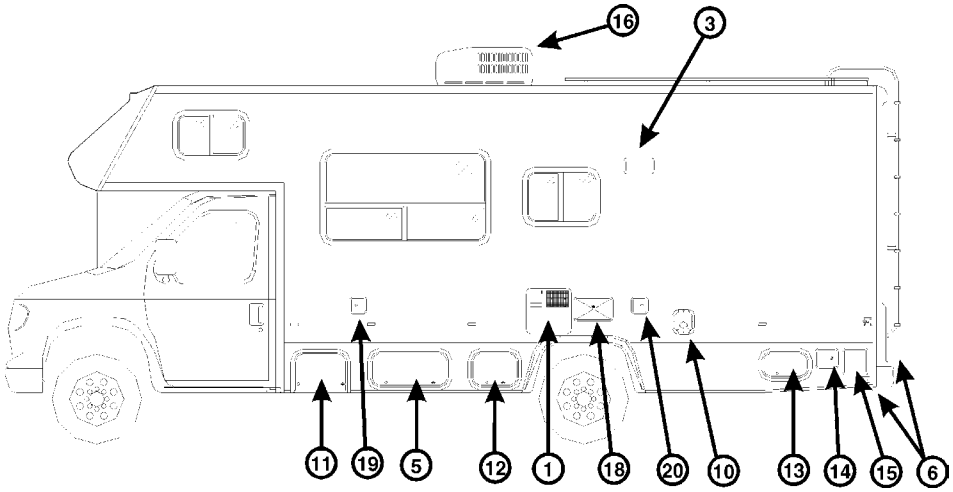



Fig. 1-4 EXTERIOR IDENTIFICATION (LEFT)

NOTE

Some equipment shown may be optional.

*CAUTION

Be careful. These features may become hot while water heater or furnace are in use.

## 1.8 SERVICE ASSISTANCE

Your dealer will be glad to provide any additional information you need and to answer any questions you may have about the operation of your motorhome. When it comes time for service, remember that your dealer knows your vehicle best and is interested in your satisfaction. Your dealer will provide quality maintenance and assistance during the period of your ownership. It is advisable that you follow a regular maintenance schedule to keep your vehicle functioning at its best.

Should you require warranty assistance while travelling, take your Motorhome to the nearest Triple E dealer for help.

## 1.9 REPORTING SAFETY DEFECTS

If you believe that your motorhome has a safety defect of any kind that could cause injury, or death, contact Triple E immediately. As well, make sure to contact the National Highway Traffic Safety Administration (NHTSA) in the U.S., or Transport Canada and report your concern.

The NHTSA will investigate the concern should there be a number of similar complaints. They have the authority to order a recall and repair campaign depending on the nature and severity of the problem.

The NHTSA may be reached by using the Auto Safety Hotline at 1-800-424-9393 (366-0123 in the Washington, DC area) or by writing to: NHTSA, US Department of Transportation, Washington, DC 20590. The Hotline will also provide you with additional information on motor vehicle safety.

In Canada, call 1-613-993-9851 or write to: Transport Canada and Road Safety, 2780 Sheffield Road, Ottawa, Ontario K1B 3V9.

## 1.10 DRIVING COMFORT

Triple E has made every effort to design and construct your motorhome for your comfort and safety. We know that your investment is important to you as well as to us. Our engineers and design team has dedicated itself to the development of the best motorhome comfort and protection packages in the industry. Here are some of the features that make the motorhome one of the finest motorhomes on the road today:

1. Passenger Comfort
   a. Optional, roof-mounted air conditioning unit with up to 15,000 BTU's of cooling capacity. Available with the air conditioner is a heat strip to supplement the forced air furnace.
   b. High output chassis air conditioner for travelling comfort.
   c. Electronic ignition LP gas furnace designed to maintain a comfortable temperature of +20 degrees C (+70 degrees F) when the temperature outside is -20 degrees C (-5 degrees F). However, temperatures may vary in the coach depending on register location.
   d. High output chassis heater for your driving comfort.
   e. Thermally efficient vacuum-bonded composite walls, floor and roof, using rigid foam insulation for strength and designed to reduce freeze-through.
   f. One piece headliner for warmth and noise reduction.
   g. Automatic, electronic ignition water heater.
   h. Optional Motor-aid water heater to keep you supplied with hot water while travelling.

2. Unit Protection
   a. Fiberglass all-weather exterior finish. Easy to maintain. Will not rust or pit.
   b. Seamless EPDM rubber roof to ensure a weather proof seal.
   c. Tubular aluminum reinforced walls and roof. Steel reinforced floor.
   d. Urethane undercoating (optional) for protection against dust and moisture and to provide extra insulation against heat and cold.
   e. An optional (XL package) fully insulated, heated holding tank compartment and discharge valves to prevent winter freeze-up. Enclosed to protect against road damage.
   f. Simplified manual water winterization system complete with water heater bypass.
   g. Exterior screws and fasteners that resist streaking.
   h. Heavy duty mud flaps for additional protection against flying stones and mud.

# 2 SAFETY

Safety, comfort and ease of operation are key considerations during the design and manufacturing of all Triple E Motorhomes. It is the responsibility of the owner or operator to read, understand and follow all instructions in the Motorhome, chassis and appliance or auxiliary system manuals and from safety signs on the vehicle. Specific items, procedures or instructions are identified with the key words IMPORTANT, CAUTION and WARNING to emphasize areas of special concern. These key words are defined as:

IMPORTANT - This word is used to highlight or emphasize a specific procedure, information or result for a system or the vehicle.

CAUTION - This word is used to highlight or emphasize a specific procedure or information that if not followed will result in damage to a system or the vehicle.

⚠ WARNING - This word is used to highlight or emphasize a specific procedure or information that if not followed can involve your personal safety as well as cause vehicle damage.

The safety glyph ⚠ ntifies an area that involves the personal safety of the operator, passengers or a bystander. Always read, understand and follow the instructions and information in the safety sign or manual instruction. Do not take chances with safety. Most accidents can be prevented.

In this section we have compiled a series of items relating to safety that everyone should follow. Although this compilation is thorough, we realize that it does not cover everything. Each person has the responsibility of following all listed safety items covered in this and other manuals.

## 2.1 ⚠ ¡ENERAL SAFETY

1. The most important safety feature on this vehicle is a safe operator. It is the operator's responsibility to read, understand and follow all safety and operating instructions in the vehicle, chassis, appliance and system manuals. Most accidents can be prevented.

2. A person who has not read and understood all operating and safety instructions is not qualified to operate this vehicle. An untrained or uninformed operator exposes themselves, passengers and other drivers/vehicles/property to possible serious injury or death and property damage.

3. Do not modify the vehicle in any way. Unauthorized modification may impair the function and/or safety and could affect the life of the vehicle.

4. All approved driver and passenger seats are equipped with seat belts. When occupied while driving, each must be locked in the forward facing direction. Each driver and passenger must occupy only the approved seats and fasten seat belts when the unit is moving. Do not allow any passengers in the vehicle unless they have their seat belt attached while in an approved seat. When the vehicle is moving, no one should be using the sleeping, cooking, bathroom, living areas.

5. Always fasten the seat belt low on the torso and keep it snug to transmit the force from the belt into the hip/pelvic area of the body. Pregnant women should wear a lap/shoulder belt whenever possible. Wear the belt snug and low throughout the pregnancy.

6. Review the location, function and operation of the escape window with everyone who will be riding in or using the motorhome. Inspect the locking mechanism.

7. Establish a monthly fire extinguisher inspection program to keep the extinguisher in good condition and fully charged. Inspect the extinguisher again prior to a vacation or trip.

## 2.2 DRIVING SAFETY

1. Only trained and licensed drivers are allowed to drive this vehicle.

2. Observe all applicable road and driving regulations. Check with local transport authorities if you have any questions.

3. Inspect the vehicle before driving. Adjust, repair or replace components or systems to maintain vehicle in good driving condition. Do not drive the motorhome unless it is in good condition.

4. Do not make adjustments such as seat position, tilt steering wheel etc. while driving.

5. A motorhome is considerably larger and heavier that an automobile and results in different handling characteristics. Allow more space for stopping, turning, passing, parking, accelerating etc. during operation. The extra height results in different stability characteristics. Drive at a slower speed when turning, cornering or on rough terrain. Use extra care in adverse conditions such as rain, darkness, snow, sleet, icy surface, hilly terrain, rough road or a soft surface. Refer to your chassis manual for additional instructions.

6. Maintain brakes in top condition at all times. Allow extra distance for stopping. Be extra vigilant in adverse surface conditions such as wet, icy, slushy, rough or a soft surface when applying the brakes. After going through water, slush or snow, apply the brakes carefully in an open area to check if one side grabs. Use gentle pedal pressure to dry the brakes and restore uniform operation. Do not operate vehicle if uneven brake action persists.

## 2.3 FUEL (MOTOR AND LP GAS)

1. Do not smoke when filling vehicle fuel tank, generator fuel tank or LP gas tank.

2. Extinguish all pilot lights before refuelling.

3. Do not fill the LP gas tank when the generator is running.

4. Do not bring or store fuel or LP gas containers, gasoline or other flammable liquids in the vehicle. Vapours can be released causing breathing difficulties or an explosion or fire. LP gas containers vent excess pressure into the atmosphere.

5. Do not fill LP gas containers more than 80% of capacity. Overfilling can lead to excessive venting or gas flow and result in an explosion or fire.

6. Do not use an open flame to check for an LP gas leak. Use soapy water and watch for the bubbles. Close valve on tank and latch all covers, caps and doors after filling system.

7. Do not connect natural gas to the LP system.

8. Install LP gas regulators with the pressure regulator vent facing downward. Do not obstruct vent hole. In cold weather, condensation can get into the regulator and cause freeze-up. Use a light bulb to thaw out. Do not use an open flame or heat lamp to thaw out.

9. Turn igniter knob to create a spark at the burner when burner is turned on. Large volumes of gas can lead to an explosion and fire if igniter is not turned when the burner is turned on. Turn burner off and let gas dissipate before trying to relight if it does not light immediately.

10. Do not use the furnace when the vehicle is moving. Turn the gas off at the LP container.

11. Do not obstruct LP gas compartment when parking to provide access to master valve to gas system. Open access allows emergency workers to close master valve if an emergency occurs.

## 2.4 ASPHYXIATION

1. Do not use portable fuel-burning equipment including wood and charcoal grills and stoves in the vehicle. The use of this equipment can generate deadly carbon monoxide gas or cause fires.

2. Provide proper ventilation when using the gas range or oven to prevent asphyxiation. Do not use the oven or range to heat the vehicle. Long term use of these appliances for space heating increases the chance of asphyxiation. Before using the range or oven:
   a. Open overhead vent or turn on exhaust fan, and…
   b. Open window.

3. Avoid breathing the exhaust fumes from a gas or diesel engine and LP gas burner such as the vehicle or generator engines and the range, oven, refrigerator, furnace or water heater. Position the vehicle so the wind blows the engine exhaust fumes away. Provide ventilation to the inside of the vehicle for adequate air exchange when appliances or furnaces are being used to prevent a build-up of carbon monoxide. Be sure all alarms are working.

4. Do not run vehicle or auxiliary generator engine in a confined area such as a garage unless you are just moving it out of the area.

5. Use vent or air conditioning fan to force fresh air into the interior when vehicle is in an open area with the engine running for more than just a short time.

6. Maintain engine(s) exhaust system components in top condition to prevent fumes from entering vehicle. Check when changing oil, when exhaust sound changes or when underbody is damaged.

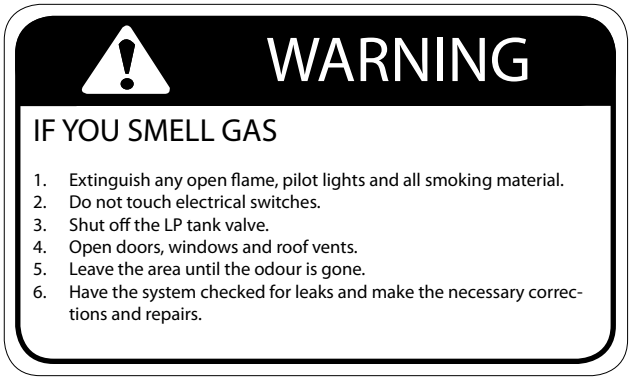
7. Close rear windows when driving to prevent drawing exhaust fumes into vehicle.

## 2.5 FORMALDEHYDE

Formaldehyde based adhesives are used in some components in this vehicle and may release small amounts of formaldehyde fumes into the vehicle for an unknown period of time until fully dissipated. Some people who are allergic to the fumes may experience irritation to the eyes, ears, nose and throat. Small infants may have a more serious reaction. Although long range effects are not well understood, testing to date has not revealed any serious health effects in humans at the level of emission from these products. Reduce the effects of the formaldehyde fumes by keeping the unit well ventilated.

## 2.6 LP GAS LEAKS

1. Read, understand and follow safety sign next to stove:




2. Use soapy water to check for leaks and watch for bubbles. Do not use an open flame.

3. Correct or repair leak(s) before using appliances or vehicle again.

## 2.7 ALARMS

1. LP Gas Alarm:
   a. Sounds whenever there is an unsafe amount of gas in the vehicle.
   b. Follow instructions on safety sign and air out vehicle to silence alarm.
   c. Have a qualified service man find the leak and correct the problem before using unit again.

2. Carbon Monoxide Alarm:
   a. Sounds whenever there is an unsafe amount of carbon monoxide gas in the vehicle.
   b. Open doors, vents and windows to air out vehicle and silence alarm.
   c. Have a qualified service man check all burners, clean, repair or replace any defective burners.
   d. Remove all fuel or wood burning devices from inside vehicle.
   e. Have a qualified serviceman check all engine exhaust system components. Repair or replace any defective components. Position motorhome so wind blows exhaust fumes away.

3. Smoke Alarm:
   a. Sounds whenever there is an unsafe amount of smoke in the vehicle. Always use exhaust fan over the stove when cooking.
   b. Open doors, vents and windows to air out vehicle and silence alarm. Correct and eliminate smoke source.
   c. Check alarm on a regular basis. Check when removing from storage, before trips and weekly thereafter. Depress center button to test alarm electronics. Test alarm sensor by blowing smoke (from safe, fire-free source) past sensor. If alarm does not sound when testing, determine source of problem and correct or replace alarm.
   d. Do not remove battery to silence alarm. When alarm "beeps" every minute, battery is weak and must be replaced. Do not allow battery to go dead. Be sure to replace with recommended battery. Test after battery is replaced.
   e. Clean and vacuum opening on smoke alarm once a month.
   f. Do not try to repair alarm. Replace it.
   g. Smoke alarms are not perfect and do not respond in all situations. The best safeguard is fire prevention.

4. Recurring alarm(s) indicate the slow accumulation of LP gas, carbon monoxide, or smoke. Have an authorized service center check system and identify source. Correct problem before resuming use of unit.

5. Refer to alarm manual(s) for more detailed instructions.

## 2.8 ELECTRICAL

1. Use care when working around batteries. The gases given off when charging are explosive. Keep sparks and flames away from battery. Wear protective clothing, eye protection and remove jewellery. Do not short across terminals.

2. Do not overload electrical circuits. Replace circuit breakers and fuses with components of similar capacity. Do not replace with larger capacity components (breakers or fuses).

3. Use only 3 prong grounded power and appliance cords.

4. Be sure motorhome is well grounded to prevent shocks or electrocution. Do not plug utility power cord into an outlet that is not grounded. Do not modify plug to fit a receptacle for which it was not designed.

5. Use care when handling electrical appliances, power cords and other components. Misuse or abuse of electrical components can lead to shocks or electrocution. Do not use electrical components, cords or appliances with bare feet, wet hands or while standing in water or on wet ground.

6. Do not attach an extension cord to the utility power cord.

## 2.9 LOOSE COMPONENTS

1. Tie, strap or secure all tables, chairs and other furniture before transporting.

2. Close, latch or lock all doors, panels and gates before travelling.

3. All passengers must be seated in a seat that is equipped with a seat belt and the seat belt fastened.

4. Stow all cooking, serving, eating and other loose components before moving. Any loose component can become a projectile during sudden stops, manoeuvring or an accident.

## 2.10 MAINTENANCE

1. Do not attempt to start vehicle by hot wiring or shorting across starter terminals.

2. Do not remove radiator cap when radiator or engine are hot. Steam or hot fluid can be released. Check coolant level using overflow reservoir.

3. Do not go under a vehicle that is supported with a jack.

4. Do not mix bias and radial ply tires on the vehicle. Mixing types of tires can affect handling characteristics. Replace with the same size, type and load rating.

## 2.11 EMERGENCY EXITS

Each Motorhome is designed with an emergency exit window in the sleeping area.

1. Emergency Exit:
   Press down on the red latches of the emergency egress window and push out the window. (The egress window has hinges on top).

# 3 PREPARATION

Refer to information pack supplied with the Motorhome prior to using or driving the unit. Read, understand and follow instructions in the chassis, motorhome, appliance and system manuals. Also follow the safety tips provided in Section 2. Motorhomes can be used many ways and in many conditions or circumstances. We have tried to compile operational and safety instructions to cover the normal conditions encountered with the unit. However these instructions are not all-inclusive. Each user or operator has the responsibility to use common sense around the unit and to consult a dealer if you have any questions.

## 3.1 VEHICLE PREPARATION

### 3.1.1 KEYS

Several number coded keys are supplied with the vehicle and include ignition, side door, baggage compartment, generator compartment and others depending upon the features of your unit. Always keep a list of these numbers in a safe place (not in the vehicle) for easy reference should you misplace any of the key(s). Supplying a locksmith with these numbers will allow them to cut a key to fit your lock.

### 3.1.2 VEHICLE LOADING

The components of your vehicle are designed to provide satisfactory service if the vehicle is not loaded in excess of either the gross vehicle weight rating (GVWR) or the maximum front and rear gross axle weight ratings (GAWR's). These ratings are listed on the Canada and U.S. Department of Transport Sticker located on the driver door post.

The (GVWR) Gross Vehicle Weight Rating, is the maximum permissible weight of the motorhome. The GVWR is equal to or greater than the sum of the unloaded vehicle weight plus the net carrying capacity.

The (UVW) Unloaded Vehicle Weight means the weight of the motorhome as built at the factory. It includes full fuel, engine oil and coolants. The UVW does not include cargo, fresh water, LP Gas, Occupants, or dealer installed options.

The (NCC) Net Carrying Capacity, means the maximum weight of all occupants including the driver, personal belongings, food, fresh water, LP Gas, Tools, Dealer Installed Accessories, etc., that can be carried by this motorhome. (NCC is equal to or less than the GVWR minus UVW).

The (GCWR) Gross Combination Weight Rating, means the value specified by the Chassis manufacturer as the maximum allowable loaded weight of this motorhome with its towed trailer or towed vehicle.

To check that your motorhome is properly loaded, drive the fully loaded vehicle to a scale and weigh as follows:

a. Drive only the front wheels onto the scale to obtain the front gross axle weight.
b. Next, place the entire vehicle (both axles) onto the scale to obtain the gross vehicle weight.
c. Drive forward till only the rear wheels are on the scale and obtain the rear gross axle weight.

Compare the gross vehicle weight with the GVWR on the sticker. If the gross vehicle weight exceeds the GVWR, you will have to reduce the total vehicle load. If the gross vehicle weight is less than the GVWR on the sticker, check the front and rear gross axle weights against the front and rear GAWR's on the sticker. If either axle weight exceeds the GAWR for that axle, redistribute the load to ensure that loads on front and rear axles are within the required limit.

Heavier items should be loaded as centrally and as low as possible. Lighter items may be stored in cabinets, closets and drawers. Luggage or similar cargo inside your RV should be secured to prevent it from causing damage.

Take note of this label in all exterior storage compartments.

CAUTION

Baggage Compartments Are Not To Be Loaded In Excess of 75 kgs./165 lbs.

Total Vehicle Load Not to Exceed The Maximum GVWR/GAWR/GCWR Of The Chassis.

## 3.1.3 TRAILER TOWING

Towing a trailer can affect the handling, durability, performance and economy of your motorhome. The factory installed towing hitch is rated for:

a. 500 lb. - maximum hitch or tongue weight.
b. 5000 lb. - maximum trailer weight.

The combined weight of the motorhome and the towed vehicle should not exceed the Gross Combined Weight Rating (GCWR). Also, the combined weight of the motorhome and towed vehicle should not exceed the motorhome's Gross Vehicle Weight Rating (GVWR) or its rear Gross Axle Weight Rating (GAWR) as listed on the Vehicle Certification label.

Fig. 3-1 TRAILER HITCH

To be sure of the correct balance in weight, it is advised that you take your loaded vehicle to a weigh-scale to determine the actual weight distribution. After you have done this once, you will have a better idea on how to load in the future.

Remember, your motorhome will handle differently with a trailer in tow. Stopping distances will change. Make sure your trailer is equipped and connected to your motorhome with the proper brake system. When descending a steep or long grade, reduce speed and shift to a lower gear to control vehicle speed. Avoid prolonged or frequent application of brakes if at all possible to prevent overheating and possible failure of the braking system.

**WARNING**

For safety towing and vehicle handling, maintain proper vehicle and trailer weight distribution.

The total weight of the motorhome and the vehicle towed must not exceed the GCVW rating as stated on the Vehicle Certification label.

**CAUTION**

Exceeding any of the recommended gross vehicle weight ratings may result in vehicle damage.

Do not install a weight equalizing type of hitch on your motorhome.

## 3.1.4 AUXILIARY VEHICLE TOWING

If you are planning to pull a vehicle or a trailer with your motorhome, your dealer or Triple E will provide you with the information, advice and direction you will require.

## 3.1.5 PARKING, LEVELLING AND BLOCKING


Fig. 3-2 PARKING

Try to pick a spot as level as possible on which to park your motorhome. You may choose to drive in or back in depending on your personal preference. Remember, however, that all your utility connections (water, sewer, electrical, etc.) are all located on the left side of your motorhome.

It is important that you make sure your motorhome is levelled correctly whenever you park, not only for your own comfort but for the proper functioning of your appliances such as your refrigerator. The vapor cooling system can "lock up" and damage the refrigerator if it is not level. As well, the various water and waste levels in the different holding tanks will have a reduced holding capacity if not level. In addition, the sewer drainage system needs to be level in order to function properly.

Use manual levelling jacks or wood blocks to raise the lower end or side of the motorhome to bring it to level. After your motorhome is levelled, use wheel chocks or similar devices in front or behind the wheels in order to prevent your motorhome from rolling off the blocks. When placing blocks beneath a set of dual wheels make sure you block both tires so that the load is not carried by one tire.

**WARNING**

Always exercise care and caution when parking and levelling your motorhome. Make sure everyone, especially children, are well clear until the vehicle has been stabilized.

# 4 CONTROLS

It is the responsibility of each owner, operator, driver or user to be familiar with the positions, functions and settings of all controls. Each new person should be trained in all aspects of motorhome operation prior to starting. Review this section as often as required to understand the controls. Contact your dealer if you have any other questions.

## 4.1 CHASSIS CONTROLS

Refer to the manual provided in the information package from the chassis manufacturers for details on the standard automotive, steering column, transmission and instrument cluster controls, lights and gauges.

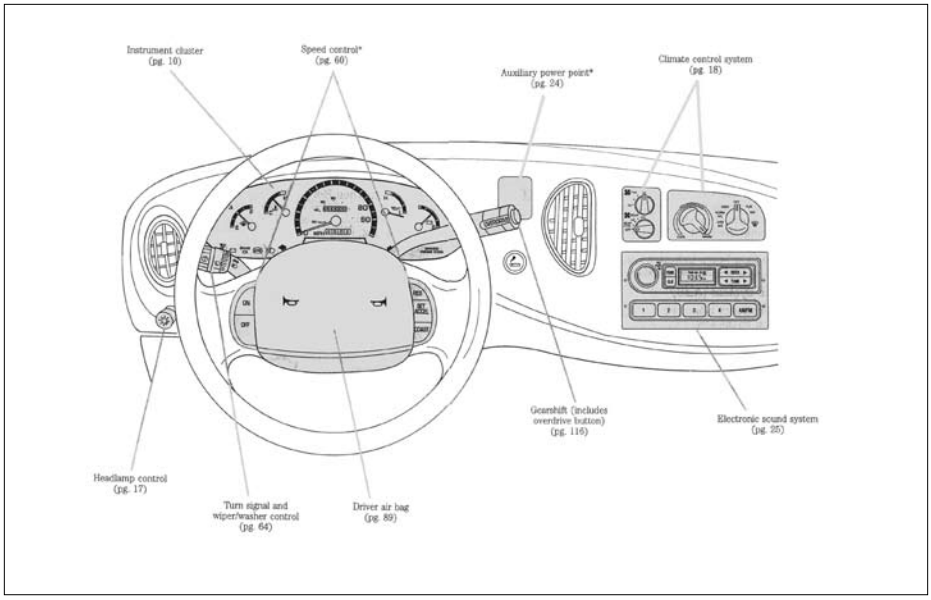



Fig. 4-1 INSTRUMENTS

## 4.2 DASH CONTROLS

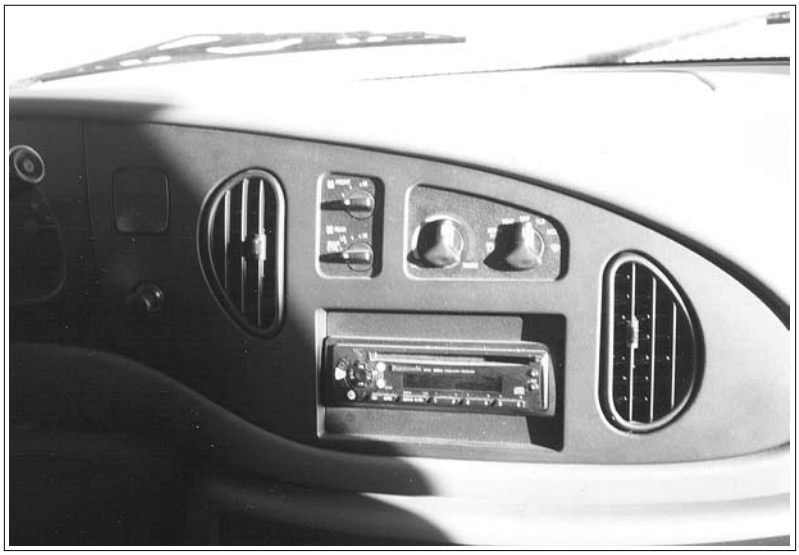


Fig. 4-2 RIGHT SIDE

1. Right Side:
   a. Ignition Key:
      This standard automotive 4 position rotary switch controls the ignition and electrical system for the engine and control functions.
      - Turn to the most counterclockwise position to turn the power on to the auxiliary control functions.
      - Turn to the first clockwise detent for OFF where the engine and all electrical power has been turned off to the instruments.
      - Turn to the second clockwise detent for RUN. This is the normal engine running position.
      - Turn against the last spring loaded detent to engage the starter. Release the key when the engine starts and it will return to the run position.
   b. Gear Shift:
      This lever controls the selection of the transmission gear. Depress the brake and move to the desired gear.
   c. Power Outlet:
      This panel provides 12 volt power for any auxiliary equipment.
   d. Cigarette Lighter:
      This is a standard automotive cigarette lighter.

d. Radio/Tape Deck:
This is a standard radio/cassette tape deck. Refer to the radio/tape deck manufacturers manual in the information package for more details.
e. Climate Control:
This is the standard climate control used for all vehicles and includes both the heating and cooling functions for the driving section of the vehicle.
f. Fuel:
This displays the amount of fuel in the gas tank.
g. Temperature Gauge:
This displays the engine coolant temperature.
h. Speedometer:
This indicator displays the travel speed and the odometer displays the kilometers travelled.
k. Oil Pressure:
This displays the engine oil pressure.
m. Indicator Lights:
Review the chassis manual to identify the indicator lights on the instrument panel and their function.

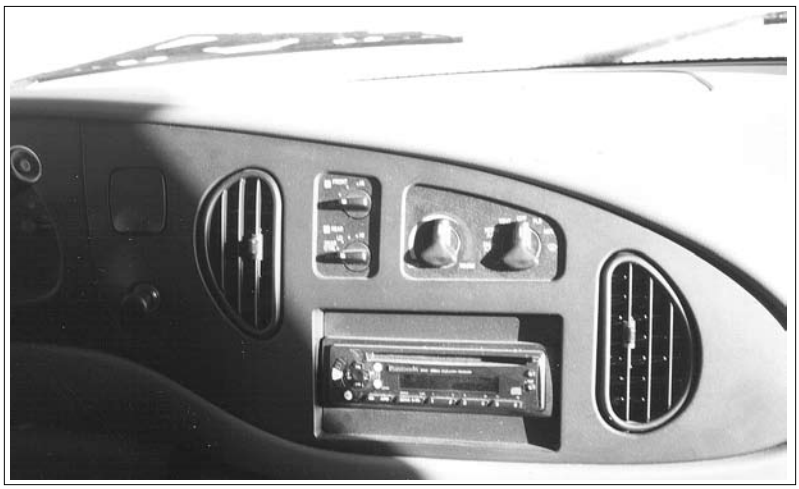


Fig. 4-3 RIGHT SIDE


Fig. 4-4 INSTRUMENT PANEL

2. Left Side:
   a. Left Column Lever:
      This lever controls the turn signals, headlights and high/low beams. Turn to control the headlights, move up and down for the turn signals and in and out for high/low beams.
   b. Horn:
      The horn control is located in the center of the steering wheel. Depress the center to sound the horn.
   c. Cruise Control:
      These buttons on each side of the steering wheel set and control the functions of the cruise control. Refer to the chassis manual for more details.
   d. Headlights:
      This push/pull switch controls the power to the headlights. Pull out to turn the lights on and push in to turn off.

Steering Wheel

Dash

Fig. 4-5 LEFT SIDE

## 4.3 CAB DOOR

1. Door Lock (Power Lock Optional):
   This rocker switch controls the driver's side door lock. Depress the one side to lock and the other side to unlock.

2. Cab Door Window (Power Window Optional):
   This rocker switch controls the door window. Depress the front side to open and back to close.

Fig. 4-6 DRIVERS DOOR

## 4.4 DRIVERS/CO-PILOT SEAT (OPTIONAL POWER SEATS)

1. Front Door Side:
   a. Front Of Seat Height:
      This spring loaded to centre switch sets the height of the front of seat. Depress the upper portion and hold the switch to raise the front of the seat. Depress the lower portion and hold to lower the front of the seat.
   b. Forward-Back Position:
      This spring loaded to centre switch sets the position of the drivers seat. Push the switch forward and hold to move the seat forward. Push the switch rearward and hold to move the seat back. Pull the switch up to raise the seat and down to lower.

Fig. 4-7 DOOR SIDE CONTROLS (TYPICAL)

   c. Back Of Seat Height:
      This spring loaded to centre switch sets the height of the back of the seat. Depress the upper portion and hold to raise the rear of the seat. Depress the lower portion and hold to lower the back of the seat.

   d. Back Rest Angle:
      This spring loaded lever controls the lock on the back rest angle position mechanism. Pull the lever up and hold to release the position lock. Gently lean back to push the back rest down. Lean forward to allow the back rest to tilt up. Release the lever to engage the lock and hold the back rest in position.

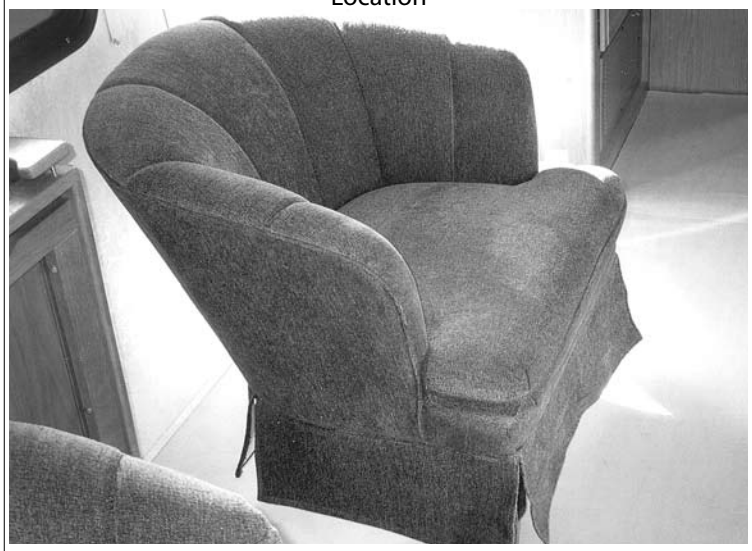
## 4.5 COCKTAIL SEATS

Cocktail chairs are located in the living room.

1. Swivel Lock:
   This latch on the right side releases the swivel base. Lift the latch to release the lock and allow the chair to swivel. When the seat returns to this position, the lock will again engage.

2. Position Lock:
   This latch releases the sliding base. Pull the latch to release the lock and allow the seat to move forward or back. Release the latch to anchor the seat in place.

Location



Controls

Fig. 4-9 COCKTAIL CHAIRS

## 4.6 SEAT/SHOULDER BELTS

The driver and passenger seats are equipped with lap/shoulder belts. Every occupant must be seated in an approved seat with the belt fastened whenever the motorhome is moving. Accident statistics prove the importance of the need to use seat belts. Vehicle occupants not seated in an approved seat and restrained with a seat belt received more injuries of a more serious nature than those properly restrained.

Fig. 4-10 LAP/SHOULDER BELT

1. Lap/Shoulder Belts:
   The driver and passenger seats are equipped with a combination lap and shoulder belt for maximum restraint.
   a. Sit in the seat.
   b. Pull the spade end of seat belt across the body and insert it into the buckle. Be sure the buckle "clicks" to indicate that the spade is locked securely in place.
   c. Be sure the belt is not twisted to minimize load concentrations during impact. A flat belt distributes impact loads over a wider area of the body to reduce the chance of injury.
   d. Slide the lap portion of the safety belt system low on the torso to distribute the load across the hip/pelvis area.
   e. Slide the shoulder strap so it lays diagonally across the chest and shoulder area. Do not lay it against the neck.
   f. Depress the button on the buckle to release the belt assembly. Hold the belt as it is released to prevent it from retracting too quickly.

IMPORTANT

All seat belt retractors are equipped with locks that engage when the belt moves too fast. Move the spade end slowly and steadily when fastening to prevent locking. If belt locks while fastening, release end and let it retract fully. Then pull again to fasten.

2. Lap Belts:
   The dinette seats are equipped with lap belts. Never travel in a seat that is not equipped with a lap or shoulder belt.
   a. Sit in the seat.
   b. Pull the spade end of the seat belt across the lap and insert it into the buckle. Be sure the buckle "clicks" to indicate that the spade is locked securely in place.
   c. Be sure the belt is not twisted to minimize lead concentrations during impact. A flat belt distributes impact loads over a wider area of the body to reduce the chance of injury.
   d. Slide the strap low on the torso and touching the top of the thighs to distribute the impact load through the hip/pelvic area.


Fig. 4-11 DINETTE

   e. Depress the button on the buckle to release the spade/belt assembly. Hold the belt as it is released to prevent it from retracting too quickly.

IMPORTANT

All seat belt retractors are equipped with locks that engage when the belt moves too fast. Move the spade end slowly and steadily when fastening to prevent locking. If belt locks while fastening, release end and let it retract fully. Then pull again to fasten.

3. Pregnancy:
   Pregnant women should wear their lap belts low on their torsos and shoulder straps diagonally across their chests. Do not position the strap against the neck. Wearing a seat or shoulder/lap belt properly will protect both the mother and the unborn child.

4. Child Restraints:
   Child restraint systems are a legal requirement in most jurisdictions of North America. Statistics prove that children not secured with a certified child restraint systems experience more severe and more frequent injuries than those properly restrained. In order to provide the safest restraint system for your child during transport, follow these considerations when selecting an appropriate child restraint system:
   a. Purchase a child restraint system that is labelled to be certified to all applicable US Motor Vehicle and Canadian Children's Car Seats and Harness Regulations.
   b. Make sure the system will attach to your vehicle conveniently and provide safety for your child every time it is used.
   c. Be sure the restraint system is suitable and adequate for your child's age, weight and height. Check the label for this information.
   d. Review the instructions supplied with the child restraint system. Be sure that anyone placing a child restraint system in a vehicle fully understands how it must be located, anchored and used. Improperly placed or anchored restraints will not provide an acceptable level of safety for your child.

## 4.7 SIDE ENTRY

The side entry doorway left wall is equipped with a switch panel that controls the following functions:

1. Porch Light:
   This 2 position rocker switch controls the power to the outside porch light. Depress the upper portion of the switch to turn the porch light on and the lower portion for off.

2. Interior Light:
   This 2 position rocker switch controls the power to a coach interior light. Depress the upper portion of the switch to turn the light on and the lower portion for off. The switch or the light must be turned on.

3. Bag Lights (XL Option Only):
   This 2 position rocker switch controls the power to the lights in all the exterior storage compartments. Depress the upper portion of the switch to turn the power to the lights on and the lower portion to turn off. This master switch must be on before any of the light switches in any exterior compartment will work.

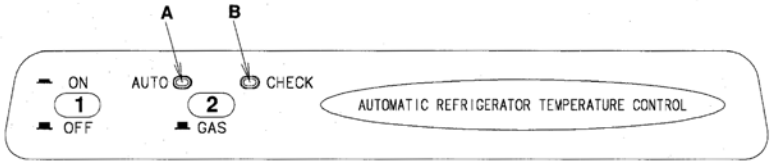
Fig. 4-12 SIDE ENTRY

## 4.8 REFRIGERATOR

The refrigerator control panel is located between the freezer compartment and the fresh food compartment. The panel is equipped with push button switches and an indicator display. Refer to the instructions in the information package for more details.

1. Master ON/OFF Switch:
   This push button switch controls the power to the refrigerator.
   a. When the refrigerator is operating, depress and hold the switch for 2 seconds to turn refrigerator off.
   b. When the refrigerator is off, depress the switch to turn the unit on.

2. Mode Switch:
   This push button switch controls the operating mode of the refrigerator. Depress and hold the switch and each of the four operating modes (automatic, AC, LP or dc) will flash one at a time in the center display. Release the switch when the desired mode is flashing on the center display.




Schematic

Panel

Fig. 4-13 REFRIGERATOR CONTROLS

3. Temperature Set Switch:
   This push button switch controls the operating temperature of the freezer and fresh food compartments. Depress the switch and the operating temperature setting will be shown in the center display. The settings range from 1 to 9 with 9 being the coldest. Depress and hold the switch and the system will cycle through the settings. Release the switch at the desired setting.

4. Display:
   This display shows the operating mode or temperature setting depending on which switch is pushed.

## 4.9 LIGHT SWITCHES

Many rocker or standard light switches are used throughout the motorhome to turn lights on and off. If there is any confusion as to which switch and light work together, try the switch.

Ceiling

Side Consol

Bedroom

Fig. 4-14 LIGHT SWITCHES (TYPICAL)

## 4.10 COMFORT CONTROL SYSTEMS

Each motorhome is designed with a furnace to heat the living area and an optional roof mounted air conditioner that will cool or heat the interior as desired.

### 4.10.1 HEATING

The motorhome is equipped with a furnace to heat the interior and operates on LP gas. The controls are located on an inside wall. Review the instructions in the information package for more details.

1. Upper Side:
   This sliding switch sets interior temperature of the motorhome. Slide to the desired temperature setting.

2. Bottom Side:
   This sliding switch turns the furnace on and off.

Furnace Position


Compartment

Controls

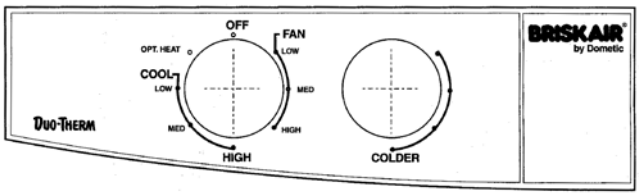
Fig. 4-15 HEATING SYSTEM

## 4.10.2 AIR CONDITIONER

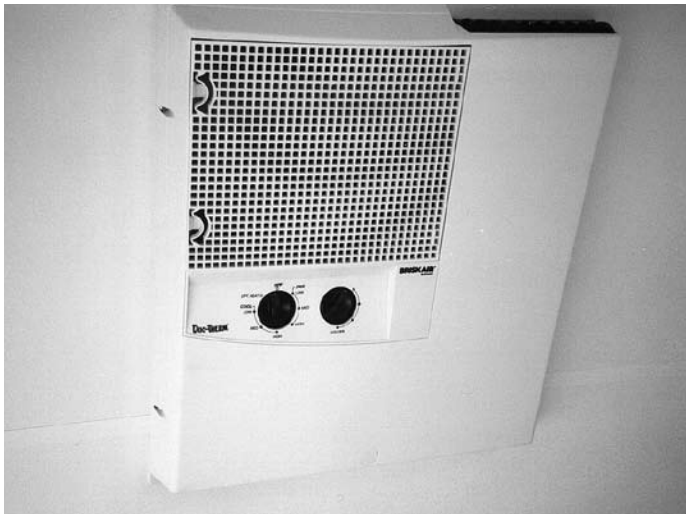
The motorhome is equipped with a roof mounted air conditioner to cool the interior of the motorhome while it is occupied. An optional heating strip is also available.

1. Master Fan Control:
   a. Off:
      This position turns the power to the system off.
   b. Fan:
      These 3 positions (high, medium and low) set the fan speed to draw outside air into the coach.
   c. Optional Heat:
      This position draws heated air into the interior and is not meant to replace a furnace but just to remove the chill.
   d. Cool:
      These 3 positions control the fan speed that draws cooled air into the coach.

2. Cooling Temperature:
   This switch sets the thermostat that controls the power to the compressor in the air conditioning system. The lower the temperature is set, the more frequently the compressor will engage for cooling.




Schematic



Controls

Roof Mounting

Fig. 4-16 AIR CONDITIONER

## 4.11 POWER ROOF VENT (OPTIONAL)

Each motorhome is equipped with a roof vent with a reversible fan to provide a controlled air flow through the vehicle. Use the vent fan in conjunctions with an open window to provide a flow of fresh air into the unit.

Inside

Outside

Fig. 4-17 ROOF VENT

Use these controls:

1. In/Out:
   This rocker switch controls the rotational direction of the fan in the vent. Depress the IN side of the switch for the fan to draw air into the coach. Depress the OUT side for the fan to blow air out. The fan must always come to a complete stop when changing directions.

2. ON/OFF Fan Speed:
   This 4 position rotary switch controls the power to the fan and the fan speed. Turn the switch to its most counterclockwise position to turn the fan off. Turn the switch to its first, second or third clockwise detents (Position 1, 2 and 3 respectively) to set the fan speeds at low, medium or high. The roof vent must be open at least 3 inches or the internal safety switch will prevent the fan from coming on.

3. Vent Height:
   This knob controls the position of the vent hood. Turn the knob clockwise to pull the hood down and close it. Turn counterclockwise to raise or open the hood.

4. Thermostat:
   This rotary switch controls the set point for the system thermostat. Turn the knob to the desired position. Moving the pointer to the red portion of the scale will increase the temperature of the set point for the vent fan to come on. To operate, the vent must be open and fan switch turned to either in or out.

## 4.12 WATER SYSTEM

A motorhome water system consists of a fresh, grey and black water system plus a water heater and plumbing. Be sure to review, understand and follow all operating instructions for the system.

### 4.12.1 WATER HEATER

The water heater is only accessible from the outside. All water heaters are designed to operate using LP gas. The system requires water in the tank before starting to heat water or the element will burn out.


Outside

Compartment Open

Fig. 4-18 WATER HEATER

**WARNING**

Do not touch the heater canister and burner exhaust vent. These components are extremely hot and contact can cause serious burns.

**WARNING**

WHAT TO DO IF YOU SMELL GAS

1. Do not try to light any appliances.
2. Do not touch any electric switch.
3. Do not use any phone in your building.
4. Immediately call your gas supplier from a neighbor's phone. Follow the gas supplier's instructions
5. If you cannot reach your gas supplier, call the fire department.

## 4.12.2 WATER HEATER BYPASS

The water heater is equipped with a valve that sets its plumbing circuit for normal or winterize. The valve is accessed from inside the motorhome by opening the bottom cabinet next to the oven. However, the location can vary depending on your specific configuration.

Watch the pointer on the pivot to determine the valve setting.

1. Normal Operation - Horizontal Handle.

2. Bypass Operation - Vertical Handle.

Refer to instruction sheet in information package for more details on winterizing procedure.

Fig. 4-19 WATER HEATER DIVERTER VALVE

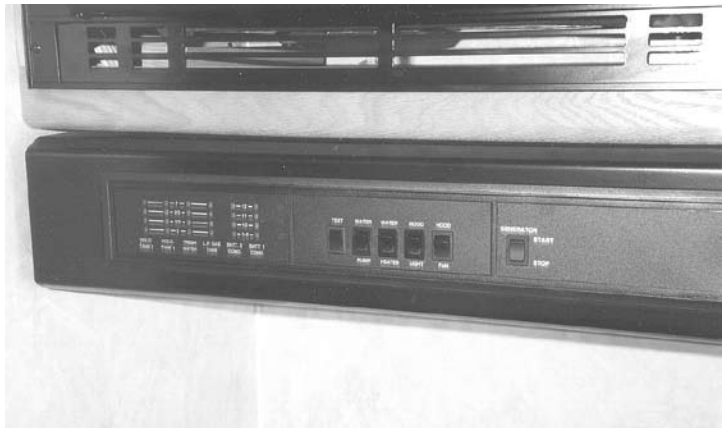
## 4.12.3 WATER PUMP

The water system is equipped with a 12 volt pump that pressurizes the system and moves water to where it is required. The water pump switch is located on the range hood.

Depress the switch once to turn the pump on and again to turn it off.

The master switch for the water pump is located at the control panel in the kitchen area. When this switch is in the on position, the pump will automatically activate when any faucet, shower or toilet is being used. In addition, there is a switch located in the bathroom. This makes it more convenient to use the system without having to go to the master switch every time.

It is recommended that the pump switch be turned off whenever leaving the motorhome for any period of time or while driving. A slow leak in a faucet or connection could drain both the water tank and the battery.



Master

Fig. 4-20 WATER PUMP SWITCHES

## 4.12.4 WATER SYSTEM ACCESS

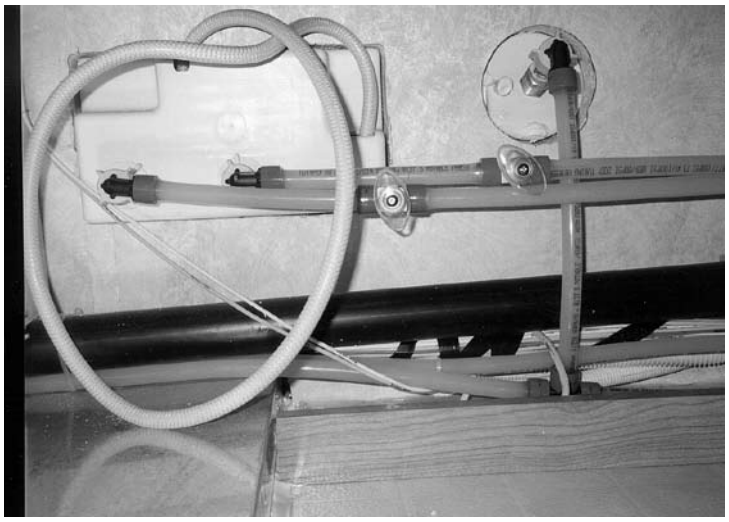
The water system is accessed on the driver's side of the motorhome. Always park this side next to the campground utilities for ease of hook-up.

1. System Access:
   a. Discharge Hose Storage.
   b. Black Water Tank Flush Fitting.
   c. Pressurized Water Fill Fitting.
   d. Auxiliary Outside Shower.
   e. Gravity Water Tank Fill Fitting.
   f. Discharge Compartment (Drain and Grey Water Valve).

2. Auxiliary Shower (Optional):
   a. Hot Water:
      This standard water tap controls the flow of hot water to the shower head. Turn clockwise to turn off and counterclockwise to turn on.
   b. Cold Water:
      This standard water tap controls the flow of cold water to the shower head. Turn clockwise to turn off and counterclockwise to turn on.
   c. Shower Head:
      This standard flexible hose shower system is mounted in the compartment. Turn the handle and lift the head to use it. Turn the collar on the head to change the spray pattern.


Fig. 4-21 SYSTEM ACCESS

Compartment



Valves

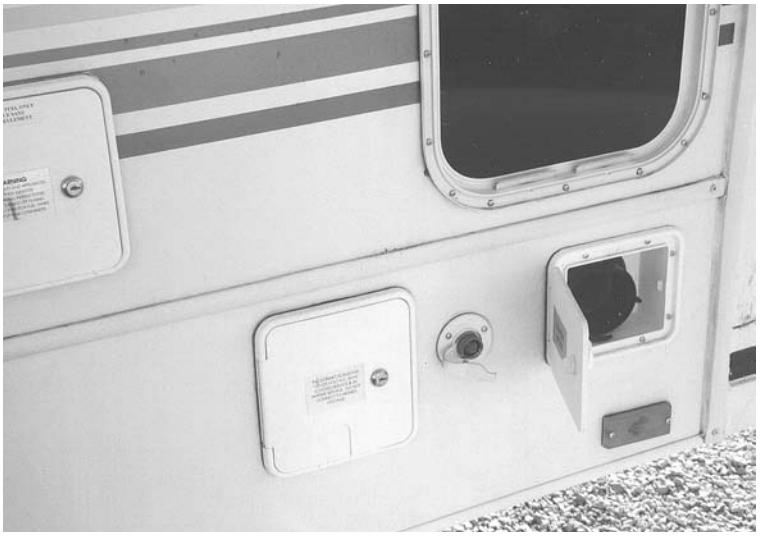
Fig. 4-22 AUXILIARY SHOWER

3. Water Fill Fittings:
   The water system is designed with 3 fittings to introduce water into the system.

   a. Pressurized Water Fitting:
      Use this fitting when using pressurized water to fill the water tank or to pressurize the system. Do not overfill the system.

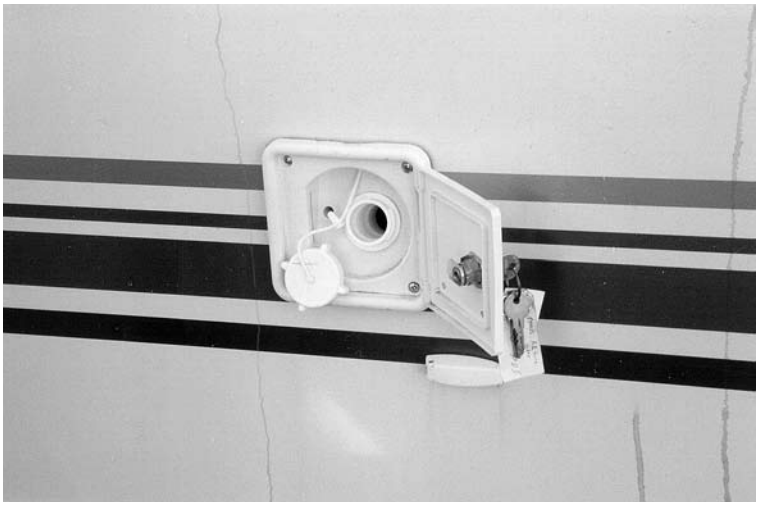
Pressurized Water

   b. Black Water Tank Flush Fitting (optional):
      Use this fitting to flush out the black water tank after it has been emptied.



Black Water Flush

   c. Gravity Water Tank Filling Fitting:
      Use this fitting to fill the fresh water tank when pressurized water is not available. Do not overfill the system.



Gravity Fill

Fig. 4-23 WATER FILL FITTINGS

4. Discharge Valves:
   a. Discharge Fitting:
   This fitting carries the discharge from the grey and black water tanks. Connect the discharge line to the fitting and route into an approved sanitary disposal system. Use the opening in the bottom of the compartment when routing the discharge hose to eliminate any low spots in the hose when discharging. Install dust cap when the discharge hose is removed.
   b. Grey Water Tank Valve:
   This is the discharge valve for the grey water tank. Pull out to open valve and push in to close. Always empty black water tank first and then the grey water. This procedure will use the grey water to rinse the discharge plumbing and hose.
   c. Fresh Water Drain Valves:
   This valve drains the fresh water tank and lines. Turn clockwise to close and counterclockwise to open. Always close valves before filling tank.
   d. Black Water Tank Valve:
   This is the discharge valve for the black water tank. Pull out to open valve and push in to close. Always empty black water tank first.

Drivers Side

Curb Side

Fig. 4-24 WATER COMPARTMENT

## 4.13 SYSTEM MONITOR

Refer to the instructions in the information package for more details.

1. Generator:
   This 3 position spring-loaded to neutral center switch controls the operation of the auxiliary generator. Depress and hold the upper position to start the generator engine. Release the switch when the engine starts. Depress and hold the bottom portion of the switch to stop the engine. All motorhomes have the generator controls pre-wired at the factory to allow easy subsequent installation.

Fig. 4-25 SYSTEM MONITOR

2. Hood Fan:
   This 2 position rocker switch controls the power to the fan over the stove. Depress the top portion of the switch to turn the fan on and the bottom for off.

3. Hood Light:
   This 2 position rocker switch controls the power to the light over the stove. Depress the top portion of the switch to turn the light on and the bottom for off.

4. Water Heater:
   This 2 position rocker switch controls the power to the water heater. Depress the top portion of the switch to turn the water heater on and the bottom for off.

5. Water Pump:
   This 2 position rocker switch controls the power to the water pump. Depress the top portion of the switch to turn the water pump on and the bottom for off.

6. Test:
   This push button switch controls the power to the monitor test function. Depress the switch and hold to check the adjacent system lights:
   a. Battery 1 Condition:
      Voltage should be 12 for full charge.
   b. Battery 2 Condition:
      Not used.
   c. LP Gas Tank:
      Measures LP gas remaining in tank.
   d. Fresh Water Tank:
      Display fresh water tank filled ratio.
   e. Holding Tank 1 (Grey Water):
      Displays grey water tank filled ratio.
   f. Holding Tank 2 (Black Water):
      Displays black water tank filled ratio.

## 4.14 CONVERTER

Each motorhome is equipped with a converter and charging system to maintain the charge in the battery, using the shoreline or generator as a power source. The converter is mounted under the dinette seat.

The converter is turned on when 120 volt power is available. If 120 volt power is not available, the normal 12 volt power requirements will run down the batteries.

Refer to manual in the information package for more detailed instructions.

Location

Fig. 4-26 CONVERTER SYSTEM

# 5 DRIVING

Always review the chassis manual before starting or moving your motorhome.

## 5.1 PRE-TRIP INSPECTION

1. Be sure all equipment is serviced and ready for travel.

2. Inspect wheel lugs for tightness. Examine all tires for road damage. Ensure that all tires are inflated to proper pressure.

3. Check All Fluids:
   a. Engine/Crankcase Oil
   b. Transmission Fluid
   c. Power Steering Fluid
   d. Radiator Recovery System
   e. Reservoir Level
   f. Battery Electrolyte Level
   g. Windshield Washer Reservoir

4. Check oil level in generator power plant (if installed). Refer to Instruction and Maintenance Manual provided by the generator manufacturer for other pre-use requirements.

5. Consult Chassis Manual for recommended list of pre-trip checks.

6. Check to see that all lights are in working order.

7. Check the engine compartment for animals. Animals and pets like the warmth of the engine compartment but make a real mess if caught in the belts.

8. Sanitize and fill fresh water tank if required. Turn off the water pump. (Unless water is needed). The water pump should also be turned off when leaving the unit for any length of time.

9. Start the refrigerator a day ahead of time so it will be cold for your trip.

10. Fill LP gas container. Be careful not to overfill LP gas container. An overfilled LP gas container will cause the gas regulator to fail, and may result in problems with LP gas components. Turn off LP gas valve on LP container. Make sure all LP gas controls are turned off (Furnace, Oven, Fridge). Check for LP gas leaks regularly using soapy water.

**WARNING**

All pilot lights and appliances shall be turned off during refuelling of motor fuel tanks and/or propane containers. Do not smoke when refuelling.

11. Check that sewer connections are properly stored and all external compartments and filler openings are closed and/or locked.

12. Be sure all doors are closed and latched, and all loose objects secured (including refrigerator contents).

13. Deodorize waste holding tank. (See Section 12.2.3 for details).

14. Check that all blocks and chocks are removed and/or stowed.

15. Check that there are no obstructions in the motorhome pathway when it moves. Be sure there is proper clearance between adjacent objects to prevent contact.

16. Disconnect and stow shoreline.

17. Lock exterior compartment doors.

18. Check that the fire extinguisher is in good condition and fully charged.

## 5.2 EMERGENCY EQUIPMENT CHECK LIST

Use this list as a guide to identify the minimum amount of emergency or safety equipment. Take more as appropriate for your travel or personal needs.

1. First Aid Kit
2. Emergency Flares
3. Tool Box and Tools
4. Plastic Bucket
5. Tow Rope or Chain
6. Wheel Blocks or Jacks
7. Water Hose
8. Electrical Cord Extension (100-150 ft./minimum 3 wire/50 amp)
9. Fire Extinguisher
10. Hydraulic Jack and Lug Wrench (Jack not supplied)
11. Spare Tire

## 5.3 ENTERING VEHICLE

1. Retract side door steps. Be sure automatic step retract system is turned on to retract step when side door is closed.

2. Check that TV antenna is retracted, stowed and secured.

3. Fully retract and lock vehicle levelling legs (if so equipped).

4. Secure all objects in vehicle. Tie, latch or lock all loose objects as appropriate. Unsecured objects can become a dangerous projectile in a sudden manoeuvre or accident.

5. Securely close and lock all doors to prevent intruders and minimize the chance of a door coming open in an accident.

6. Adjust the rearview mirrors to provide the best rearward visibility.

7. Set the drivers seat to provide the desired leg to pedal spacing for your personal comfort.

8. Fasten seat belts low on the torso and be sure they are snug. All passengers should be in a seat that is equipped with a seat belt. All pregnant riders should be in a seat equipped with a shoulder strap for maximum safety.

9. Small children should always be strapped into a car seat facing rearward.

10. Do not carry any passengers unless they are in a seat equipped with a seat belt and the best is fastened.

## 5.4 ENGINE OPERATION

Refer to the chassis manufacturer manual for engine starting and stopping instructions.

## 5.5 DRIVING CHARACTERISTICS

1. Controls:
   The motorhome driver controls are automotive type and the steering and braking controls are power assisted to help make driving as comfortable as possible. However it must be remembered that the motorhome is much higher, wider and heavier than a family automobile.

2. Handling:
   The motorhome power-to-weight ratio is lower than that of the average automobile. Therefore it is essential to compensate for less acceleration when moving into traffic or when passing another vehicle. Allow extra room to run a corner and to change lanes. When going underneath a bridge or similar overhang you must be aware of your maximum height. (Measurement must include the air conditioner plus 6 inches. Height may vary depending on chassis, make, suspension and air conditioner).

3. Mountain Driving:
   When driving in hilly or mountainous terrain you should employ different driving techniques than those used when driving under normal, flat conditions.

   a. Climbing a Hill:
      The transmission is designed to down-shift automatically when required during a longer uphill climb. If you find that the transmission shifts up and down rather frequently, it is a good idea to select a lower gear for the duration of the climb to prevent this repeated shifting. This will prevent unnecessary wear and tear on your transmission.

   CAUTION
   Observe the engine temperature carefully especially during long climbs. If you notice over-heating, pull off the road and allow the engine to cool off thoroughly before you continue. Fill the radiator with coolant if necessary.

   b. Descending a Hill:
      It is a good idea to select a lower gear on your transmission when descending a hill to avoid prolonged application of the brakes. Extended application of the brakes can cause unnecessary wear and tear and overheating.

      Under extreme conditions this could cause you to lose control of the vehicle.

   A STANDARD RULE OF THUMB:
   Use the same lower gear position when descending a hill as you used while climbing the hill.

## 5.6 DRIVING SAFETY TIP

1. When backing the motorhome, have a person stand to the rear on the driver's side to guide you.

2. Before departing on the trip, check your routes. Remember, some tunnels prohibit motorhomes with LP gas systems.

3. While travelling, make sure all occupants use their seatbelts.

4. While travelling, make sure all doors are closed and that cabinets, drawers, and loose objects are secure.

5. Instruct your family on what to do in case of fire, and hold fire drills periodically.

6. Maintain proper charge in the fire extinguisher.

7. Gas and smoke detectors should not be obstructed and should be in working order at all times.

8. Keep a well stocked first aid kit handy.

9. Keep a tool box handy.

10. Check tires often while travelling. Pay special attention to inside rear duals. Make it a habit to check tire pressures before each trip, and each time you refuel.

## 5.7 TRAVEL TIPS

As you travel with your motorhome you will learn much from your own experiences. Share with other motorhome owners and learn from them. Read RV, outdoor and camping magazines for camping and travel tips. Here are a few basic suggestions to make your travel and your camping easier and more enjoyable:

1. Know the height and width of your motorhome. Make adequate allowance for clearance.

2. Always fill your water tank with clean, fresh, potable water. Do not use a new hose to fill the tank. It may leave a taste of rubber or vinyl.

3. Conserve water especially when showering. The holding tanks have a limited capacity.

4. Dump sewage only at approved dumping sites.

5. Store all liquids in plastic containers with tight seals.

6. Watch the levels in your holding tanks. Dump regularly to avoid unnecessary build-up and potential odor. After dumping, make sure to add water to the black water tank to prevent solids from settling in the tank. Without adequate liquid in the black water tank, dumping can be difficult, if not impossible.

7. Sleeping bags are a good idea. They take up less storage space than regular bedding and they save on laundry while travelling.

8. Make sure all compartment doors and refrigerator and freezer doors are closed securely. Open these doors carefully after travelling. The contents may have shifted while travelling.

9. Reserve campsites in advance to avoid disappointment.

10. There are legal restrictions in some jurisdictions regarding vehicles with LP gas containers driving through highway tunnels. Check your route carefully as you travel.

11. Be careful not to leave odor-causing food or materials in your motorhome for extended periods of time. Make sure wet clothing and towels are dry before storing.

12. Make sure your fire extinguisher is ready for use and that you know how to operate it.

13. Try to shop for groceries before you "set up camp". This will allow you to relax and not have to leave your campsite after you have set up.

14. While driving, use your mirrors to determine whether you are crowding the center line or the outside edge of the highway. Remember, you are driving a vehicle that requires a driving style quite different from driving the family car.

## 5.8 QUICK LOADING CHECK-LIST

1. Bedding:
   a. Sleeping Bag
   b. Sheets
   c. Pillow Cases and Pillows
   d. Mattress Pads
   e. Extra Blankets
   f. Laundry Bags

2. Cooking:
   a. Can Opener
   b. Bottle Opener
   c. Aluminium Foil
   d. Matches
   e. Plastic Bags
   f. Coffee Pot
   g. Storage Dishes

3. Cleaning:
   a. Scouring Pads
   b. Cleanser
   c. Glass Cleaner
   d. Dish Soap
   e. Sponge
   f. Laundry Soap
   g. Cleaning Rags
   h. Paper Towels
   i. Garbage Bags

4. Bathroom:
   a. Bath/Hand Soap
   b. Bath Towels/Beach Towels
   c. Toiletry Kits
   d. Tooth Brushes/Toothpaste
   e. Shaver/Razor
   f. Toilet Tissue

5. Baby Needs:
   a. Car Seat/Child Restraint
   b. Portable Crib
   c. Play Pen
   d. Mattress Pads
   e. Extra Blankets
   f. Laundry Bags

6. Personal:
   a. Credit Cards
   b. Traveller's Checks
   c. Cash
   d. Driver's License
   e. Birth Certificate
   f. Sunglasses

7. Pet Needs:
   a. Food
   b. Leash
   c. Feeding Trays
   d. Vaccination Record

8. Miscellaneous:
   a. String
   b. Clothesline
   c. Insect Repellent
   d. Tape/Masking/Duct

9. Additional Items as per Individual and Personal Tastes and Needs:

## 5.9 SEVERE WEATHER INFORMATION

As a motorhome traveller you will find the desire to explore new and out-of-the-way places irresistible. These recreational areas can be vulnerable to unusual and severe weather conditions that could endanger your safety. A few suggestions and safety precautions may help in case you ever find yourself in this situation.

IMPORTANT

All motorhome occupants should be familiar with these safety precautions and be alert to changes in the weather.

1. Be alert! Thunderstorms and heavy rains can occur suddenly and unexpectedly. Listen frequently to weather reports for the area in which you are camping or travelling.

2. When camping near a stream or any body of water leave plenty of space between your motorhome and the stream.

3. Avoid canyons or dry washes during threatening weather. Prepare with an alternate exit. Move to higher ground as soon as it starts raining.

4. Should you get caught in a flash flood, do not attempt to move your vehicle. Abandon it and return to it only after the water has gone down. Never attempt to drive through any flooded area.

5. Heed the warnings and instructions of local authorities.

6. Have on hand enough survival supplies for several days. This should include food, water, first-aid supplies and necessary medications.

7. When you leave home, inform someone of your destination and your schedule. Notify the same people if and when your plans change.

8. Remember These Terms:
   a. Weather Watch:
      Severe weather may develop in your area. Be prepared for an emergency.

   b. Weather Warning:
      Severe weather is occurring or is imminent. Find a safe location immediately.

      It is always a good idea when in new and strange territory, to listen to weather information on your radio or TV from time to time so that you will not be caught unaware if and when there is a sudden change in the weather.

# 6 SAFETY EQUIPMENT OPERATION

Triple E has made every effort to design the vehicle to promote safe driving, use and occupancy. In addition, it has several pieces of safety equipment that the drivers and users should be aware of and trained it their use. Review these instructions with all new people prior to using the motorhome.

## 6.1 FIRE PREVENTION

Fires can be started in a variety of ways with your vehicle including but not limited to careless smoking, malfunction of appliances or equipment, flammable material on hot surfaces, etc. Fires are best prevented rather than put out. Prevent but anticipate what to do if they occur. Review the following sections with everyone on a regular basis.

### 6.1.1 FIRE SAFETY TIPS

1. Establish and maintain good housekeeping practices. Never allow combustible materials to accumulate. Make sure you store flammable liquids in approved containers in a well-ventilated space.

2. Make sure you have charged fire extinguishers readily accessible.

3. Avoid using flammable products in the motorhome.

4. Never smoke in bed or when relaxing on the couch.

5. Do not overload electrical outlets.

6. Do not leave cooking food unattended.

7. Keep children away from electrical outlets and LP gas controls.

8. Never use matches to check for LP gas leaks. If there is a fire, get everyone out of the motorhome. If possible, use your fire extinguisher. Close all LP gas valves if possible. Call the fire department and stay a safe distance away from your unit. Do not re-enter your motorhome until the fire officials declare that its safe to do so.

9. Formulate a plan for escape from the vehicle should an emergency arise. It is particularly important that the escape plan be rehearsed with everyone, especially children, who will be travelling in or using the motorhome.

## 6.1.2 FIRE EXTINGUISHER

1. Operation:
   a. Stay at least 6 feet away from the fire and near an exit. The chemical from the fire extinguisher will shoot at least 10 feet. Stay close to the floor to avoid heat and fumes.
   b. Break the seal; grasp the fire extinguisher firmly holding it in an upright position.
   c. Press the white button. Aim at the base of the fire spraying the entire base area. Don't spray at the smoke or flames.
   d. After the fire is out, watch for "flashback".
   e. Discharge the fire extinguisher entirely and get it recharged or replaced immediately.
   f. For additional information, check in the manual that is provided with the Fire Extinguisher.

Fig. 6-1 FIRE EXTINGUISHER

2. Function:
   a. Fire extinguishers are designed to put out a fire in its initial stages. Once a fire is out of control and you cannot get within ten feet, it is probably too big to fight with your extinguisher.
   b. Do not discharge your fire extinguisher to test it. Once it is discharged even for a few seconds it will lose pressure and become useless.
   c. Check the pressure indicator on your fire extinguisher periodically. It if loses pressure, the dry chemical cannot be discharged effectively. If the pointer does not indicate in the green, replace the extinguisher immediately. Record the inspection date on the tag provided.

## 6.2 EMERGENCY ESCAPE

Each motorhome is designed with an alternate emergency exit via a window in the sleeping area.

1. Emergency Exit:
   Press down on the red latches of the emergency egress window and push out the window. (The egress window has hinges on top).

2. When window is not being used as an emergency exit, it functions as any other window to provide ventilation.

3. Formulate a plan for escape from the vehicle should an emergency arise. It is particularly important that the escape plan be rehearsed with everyone, especially children, who will be travelling in or using the motorhome.

4. Do not release or open the emergency exits while the vehicle is in motion.

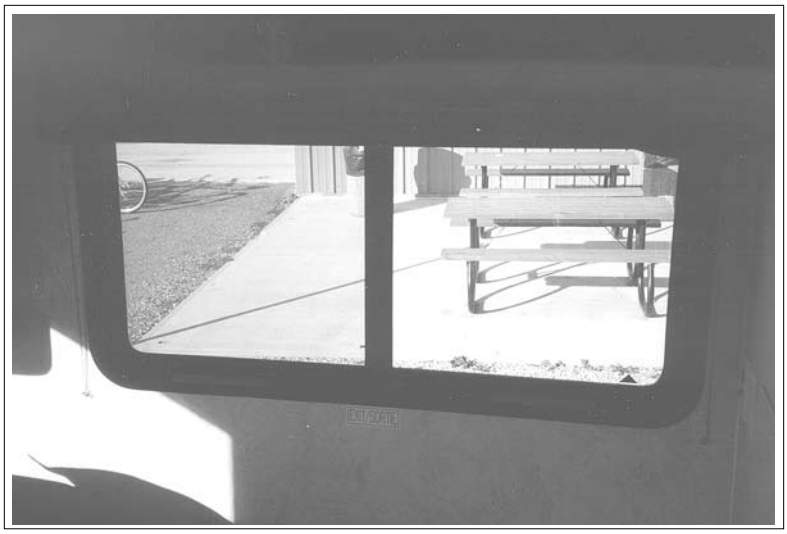


Fig. 6-2 EMERGENCY EXIT LATCHES

## 6.3 ALARMS

Each motorhome is equipped with an LP Gas, CO, and smoke alarm as standard safety equipment. Refer to alarm manual(s) for more detailed instructions. Keep all alarms in good working order.

Recurring alarm(s) indicate the slow accumulation of LP gas, carbon monoxide, or smoke. Have an authorized service center check system and identify source. Correct problem before resuming use of unit.

### 6.3.1 LP GAS ALARM

This alarm is located in the lower portion of the coach entry stairwell and sounds when there is an unsafe level of gas in the air.

a. Sounds whenever there is an unsafe amount of gas in the vehicle.
b. Follow instructions on safety sign next to stove and air out vehicle to silence alarm.
c. Have a qualified service man find the leak and correct the problem before using unit again.
d. Refer to section 11, LP Gas System and alarm manual for more details.

Fig. 6-3 LP GAS MONITOR

### IF YOU SMELL GAS

1. Extinguish any open flames, pilot lights and all smoking materials.
2. Do not touch electrical switches.
3. Shut off the LP tank valve.
4. Open doors, windows and roof vents.
5. Leave the area until odor is gone.
6. Have the system checked for leaks and make the necessary corrections and repairs.

## 6.3.2 CARBON MONOXIDE ALARM

This alarm is located in the kitchen area and sounds when there is an unsafe amount of carbon monoxide in the air.

a. Sounds whenever there is an unsafe amount of carbon monoxide gas in the vehicle.

**WARNING**

Carbon Monoxide gas is a odorless and colorless gas that is lethal to people. Do not breathe any exhaust, heating or cooking fumes to prevent asphyxiation.

b. Open doors, vents and windows to air out vehicle and silence alarm.
c. Have a qualified service man check all burners. Clean, repair or replace any defective burners.
d. Remove all fuel or wood burning devices from inside vehicle.
e. Have a qualified service man check all engine exhaust system components. Repair or replace any defective components. Position motorhome so wind blows exhaust fumes away.

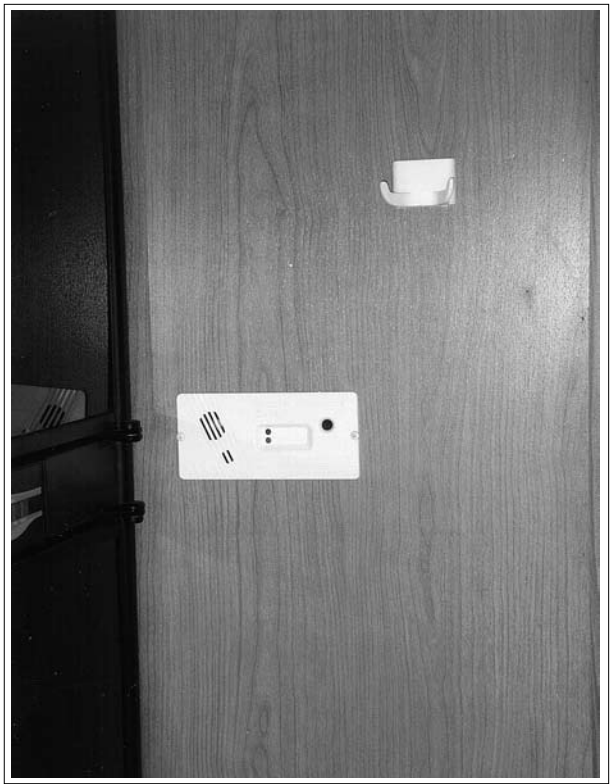


Fig. 6-4 CARBON MONOXIDE MONITOR

## 6.3.3 SMOKE ALARM

This alarm is located in the cabin and sounds whenever there is smoke in the cabin.

a. Sounds whenever there is an unsafe amount of smoke in the vehicle. Always use exhaust fan over the stove when cooking.
b. Open doors, vents and windows to air out vehicle and silence alarm. Correct and eliminate smoke source.
c. Check alarm on a regular basis. Check when removing from storage, before trips and weekly thereafter. Depress center button to test alarm electronics. Test alarm sensor by blowing smoke (from safe, fire-free source) past sensor. If alarm does not sound when testing, determine source of problem and correct or replace alarm.

Fig. 6-5 SMOKE ALARM

d. Do not remove battery to silence alarm. When alarm "beeps" every minute, battery is weak and must be replaced. Do not allow battery to go dead. Be sure to replace with recommended battery. Test after battery is replaced.
e. Clean and vacuum opening on smoke alarm once a month.
f. Do not try to repair alarm. Replace it.
g. Smoke alarms are not perfect and do not respond in all situations. The best safe-guard is fire prevention.

# 7 TRAVELLING

The motorhome has been designed to provide the driver and passengers maximum comfort and convenience while travelling safely from one place to another. It is the responsibility of the owner/operator/driver to review the safety section at the front of this manual and the chassis manual before travelling in the motorhome.

## 7.1 PREPARATION

Review the chassis manual and previous sections of this manual before starting or driving the vehicle.

## 7.2 BAGGAGE LOADING

Baggage can be loaded on top of the roof or in the bottom of the baggage compartment. Do not exceed baggage area loading or weight capacity and do not exceed vehicle GVWR or the GAWR.

### 7.2.1 ROOF LOADING

Your motorhome may be equipped with a roof rack to accommodate light weight articles. This weight should not exceed 10 lb. per square foot or a maximum of 100 lb.. Be sure each item is secured to the roof rack and that no item extends higher than the DOT limit (normally 13 feet 6 inches).

Fig. 7-1 ROOF LADDER

When the vehicle is parked, a cargo load of 100 lb. plus the weight of a 225 lb. person is permissible for inspection, loading and maintenance purposes. Again, the combined loaded weight of the vehicle should not exceed the GVWR.

### 7.2.2 BAGGAGE COMPARTMENTS

The motorhome is equipped with several exterior compartments for carrying or storing baggage or luggage.

Always secure your baggage and keep compartment doors locked when travelling.

Fig. 7-2 BAGGAGE COMPARTMENTS

## 7.3 VEHICLE WEIGHT-LOADED

When loading the motorhome, make sure that the Front or Rear Gross Axle Weight Rating (GAWR) or the Gross Vehicle Weight Rating (GVWR) and the Gross Combined Weight Rating (GCWR) are not exceeded. Check your Vehicle Certification Label for weights. If in doubt, take your motorhome to a weigh scale and check the front axle, rear axle and total vehicle weight on a scale.

Distribute the weight in the motorhome evenly from side to side to maintain maximum vehicle stability.

**IMPORTANT**

It is recommended that all holding tanks be emptied before travelling to avoid unnecessary weight.

**CAUTION**

The loaded weight of the vehicle including passengers, optional equipment, water, fuel, luggage and all other cargo must not exceed the GVWR or GAWR indicated on the Vehicle Certification Label.

## 7.4 FRONT AXLE TIRE ALIGNMENT

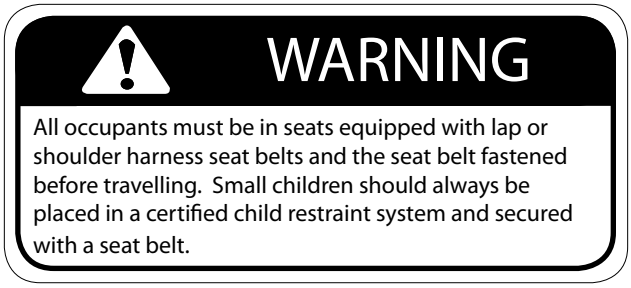
The front-end tire/wheel alignment was done at the factory prior to delivery based on the vehicle being empty and on the weight distribution at that time.

It is recommended that the front end be aligned once you have established a loading pattern according to your needs. After an initial adjustment, it is a good idea to have the front suspension checked periodically and to check tires regularly for abnormal wear.

## 7.5 MAXIMUM OCCUPANCY

The belted seating positions in your motorhome may be different than the stated sleeping capacity. In the US this is referred to as the Net Carrying Capacity (NCC) or the Cargo Carrying Capacity (CCC) in Canada.

Triple E uses sleeping capacity as opposed to seating capacity to determine the NCC or CCC. You may use all the belted seating positions available in your motorhome provided you stay within the GVWR listed on your Vehicle Certification Label.



## 7.6 SEAT BELTS

### 7.6.1 LAP BELTS

Only the dinette seats are equipped with lap belts.

Make sure lap belts are adjusted to a snug fit and as low on the hips as possible for maximum safety and protection.

**WARNING**

Snug and low belt position are important. In case of collision, the force will be spread over the strong hip area rather than the weaker abdomen area. This could prevent serious injury.

Only seats equipped with seat belts should be occupied when travelling.

Fig. 7-3 DINETTE SEATS

### 7.6.2 SHOULDER/LAP BELTS

The driver and co-pilot seats of your vehicle are equipped with shoulder belts that have automatic locking retractors that allow you to adjust the belt for maximum comfort as well as safety.

Seat belts provide maximum safety only when adjusted and worn correctly. The lap part of the belt should be worn as low as possible with the shoulder strap diagonally across the chest, over the shoulder but not against the neck.

NOTE

If you pull the strap away from the wall too quickly, the automatic retractor may "lock". To free it, relax the tension and then pull it away from the wall slowly.

CAUTION

Make sure all passengers are instructed on the release mechanisms of the seat belts so that they are able to get out quickly in case of emergency.

Fig. 7-4 SHOULDER LAP BELTS

**WARNING**

Never wear seat belts in any way other than as described. Serious injury may result from improper use of seat belts.

### 7.6.3 CARE AND CLEANING

1. Be careful not to damage the hardware or the webbing of your seat belt. Take care not to pinch them in the seat or doors.

2. Check belts and hardware from time to time. Replace any damaged parts. Do not modify or remove the belt system.

3. Keep belts clean and dry. If they need cleaning, use a mild soap solution in warm water. Do not use hot water, abrasives or bleach. These may weaken the belts.

4. If you experience a severe impact, check for and replace any damaged parts.

### 7.6.4 CHILD RESTRAINTS

In most jurisdictions across North America, child restraint systems are a legal requirement. In order to provide the best in safety measures for your child in case of an accident, we make the following recommendations:

1. Purchase a certified child restraint system. Make sure the system comforms to all Canadian and US standards for safety requirements.

2. Make sure that the system will attach to your vehicle conveniently and provide safety for your child every time it is used.

3. Be sure that the restraint system is suitable and adequate for your child's age, weight and height. Check the label for this information.

## 7.7 MIRRORS

Whether your vehicle is equipped with standard or power electric mirrors, always check the adjustment on your mirrors for maximum rear visibility before driving.

See chassis manufacturer's owner's manual for further information.

Fig. 7-5 MIRRORS

## 7.8 REFUELLING

Always consult your chassis manual to determine whether your motorhome requires gasoline or diesel for the chassis engine.

**WARNING**

Modern fuel systems may cause pressure to build up in the fuel tank during hot weather. It may happen under certain conditions, that a bit of fuel may spray from the spout when the fuel cap is removed suddenly, causing a possible hazard.

**WARNING**

Do not smoke when refuelling. Keep flames, sparks and smoking material away from fuel or flammable fumes.

1. Removing The Fuel Cap:
   Rotate the fuel cap slowly and only far enough for the pressure to be released i.e. until any "hissing" sound stops. Then remove the cap.

2. Filling The Tank:
   Do not overfill the fuel tank. Fill only until the automatic shut-off valve cuts out. This allows for expansion of the fuel and vapor space as the fuel warms up in your fuel tank.

Fig. 7-6 FUEL CAP

CAUTION

Overfilling the fuel tank may cause damage to the fuel evaporative emission system.

CAUTION

In northern climates during the winter season, winter diesel fuel must be used to prevent fuel gelling. Gelling could cause the engine to stop or make it impossible to start.

3. Fuel Tank Capacity:
   Check in the Chassis Manual for capacities.

| | E350 Chassis | E450 Chassis |
|---|---|---|
| Fuel Capacity Gal (l) | 38 (144) | 55 (210) |

Table 1 Fuel Tank Capacities

4. Fuel Types:
   Auxiliary generators draw their fuel from the main engine gasoline tank. The fuel pick-up tube is shorter than the engine pick-up tube. This prevents the vehicle fuel tank from being completely emptied on site. On motorhomes equipped with a diesel engine. A separate fuel tank is installed to provide gasoline for the generator.

IMPORTANT

Be sure to use the proper fuel. Errors in the fuel type can be hazardous and can create costly repairs.

# 8 EMERGENCIES WHILE DRIVING

The Triple E Motorhome is designed with features that allow the driver/occupants to resolve emergencies or failures when travelling. Review this section to be familiar with the recommended procedure to resolve these conditions or situations. Review this section with all new drivers and before each trip.

## 8.1 HAZARD WARNING LIGHTS

Each motorhome is designed with a hazard warning light system that is similar to the system on an automobile. Both the front and rear turn signals flash in unison when the system is turned on.

Refer to the chassis manual for details and location of this switch.

It is recommended that the warning lights be used whenever the vehicle is stopped on the side of the roadway. The intermittent flashing lights will alert other motorists to a potential hazard and to take extra care. The system is designed to continue to flash when the switch is on even though the ignition key is removed and you have left the vehicle.

Fig. 8-1 SPARE TIRE

## 8.2 FLAT TIRE

When you have a flat tire while driving, slow the vehicle gradually and pull off to the side of the road. Slow your vehicle gradually to prevent losing control. Stop on a level firm surface and engage parking brake. Turn on hazard warning lights to alert other drivers to use extra caution when driving in the vicinity.

Refer to chassis manual for instructions on where to place jack under the frame. Review and follow all safety precuations listed.

Remove spare tire from its storage position.

It is recommended that a professional qualified road service be used whenever possible. If this is not possible, follow the instructions in the chassis manual.

Be sure the lug nuts are tightened to their specified torque. Always use an accurate torque wrench when mounting the wheel. Check the torque and re-tighten after 25 and 100 driving miles. Check the torque at each oil change.

Safety Reminders:

1. Park the motorhome on a level surface.
2. Turn off the engine and set the parking brake.
3. Turn on the hazard warning flasher.
4. Block both front and back of the tire on the opposite side of the vehicle from the flat tire.
5. If the ground is soft, use a support board under the jack to keep the jack from sinking.
6. Make sure to use only the jacking points described in your chassis owner's manual.
7. Never get any part of your body under the vehicle while jacking or while it is suspended.

## 8.3 TOWING

1. Emergency Starting:
   Do not tow the motorhome in an attempt to start it. The powertrain is not designed to transmit torque to turn the engine over for starting.

2. Jump Starting:
   Open the hood and connect the jumper cables to the battery posts. Always connect positive to positive and negative to the frame. You can use the coach battery if it is fully charged and the jumper cables are long enough. Open compartment and slide out battery tray to access batteries.

Fig. 8-2 BATTERY

3. Vehicle Break-Down:
   When the vehicle breaks down, it should be towed in for repair by an approved towing service. If the vehicle breaks down on the roadway, pull off the road and stop. Engage parking brakes and turn on the hazard warning lights. Place chocks by the wheels if it is not level.

   Call an approved towing service to come and get the motorhome. Be sure to tell the towing service what kind of vehicle it is and its weight, length, width and height. The towing company will then dispatch a proper sized tow truck for your vehicle.

**WARNING**

The driveshaft must be removed from the vehicle before towing. Failure to do so may result in damage to the transmission.

## 8.4 OVERHEATING

When the engine overheats while driving:

1. Pull off the side of the road and stop immediately.

2. Shut engine off.

3. Check for proper coolant level in the recovery tank. The coolant level should be between the "full" and "add" marks on the tank.

4. If the coolant level is low:
   a. Check for leaks at hose connections, from the radiator or at the water pump. Make sure the belts are tight and that the cooling fan is turning.
   b. Add coolant to the recovery tank as soon as possible.
   c. If coolant is being lost due to leaks; if the fan belt is broken or too loose; if the red warning light stays on, stop the engine until the problem is corrected.

5. Once the temperature gauge returns to normal, resume driving, keeping an eye on the gauge. Do Not resume driving until the problem has been corrected and the temperature is normal.

**WARNING**

Never remove the radiator cap when the engine is hot. Scalding fluid and steam can blow out and cause severe burns.

# 9 HOME USE

The motorhome is designed to be your home on wheels while traveling in comfort. This section will cover the items that must be done or considered in order to obtain the maximum satisfaction from your unit.

## 9.1 PARKING

1. Parking:
   The motorhome can be stopped and parked just like an automobile. However always remember that the unit is longer, wider and higher than a car and more room and clearance must be provided.

2. Backing Up:
   a. Mirrors:
      Large mirrors are mounted on both sides of the cab to provide rearward visibility for the drivers. However, they do not provide visibility directly behind or on top (clearance) of the unit.
   b. Spotters:
      The best results are obtained when another person helps guide the driver in backing the unit into position. The driver and spotter should agree to the meaning of hand signals before starting the backing process. The spotter should always be in a position that is visible to the driver while backing.

3. Always set the parking brake and place chocks in front of and behind the wheels to prevent rolling away.

## 9.2 MOTORHOME LEVELLING SYSTEM

If you want to use any of the appliances when occupying the motorhome, it will be necessary to level the motorhome frame. The refrigerator is particularly sensitive and must be within a couple of degrees of level to function properly. A little time and planning done prior to starting to level will insure maximum enjoyment of your motorhome.

### IMPORTANT

When parking your motorhome on a uneven site, always park with the front of your motorhome facing downhill. This allows you to raise the front of your motorhome in order to level it. When you place your transmission lever in PARK, this locks only the rear wheels. If you raise the rear wheels with your levelling system your vehicle could roll off the jacks or cause undue pressure on the jacks.

1. Inspect the area where the motorhome will be parked. Select if possible an area that has a firm prepared surface. Most campgrounds provide this type of parking area for motorhomes.

2. Select an area that is level or as near to level as possible.

3. Use a carpenters level on the floor to determine where to place blocks to level the frame.

4. Level from side to side first. Place planks under the low side and drive the motorhome forward until the tires are resting on the planks. Check to see if more blocking as required to level the frame.

Fig. 9-1 LEVELLED

5. Place chocks in front of and behind the tires to prevent motorhome movement.

6. Check that the frame is not twisted by checking that all doors, drawers, etc. open and close easily. Adjust blocking to eliminate twisting.

7. Attach and connect all utilities as appropriate.

8. Reverse the above procedure when preparing to leave.

## 9.3 PROLONGED OCCUPANCY

Motorhomes are generally designed for recreational and short-term occupancy. In case of extended occupancy there are a few things to keep in mind regarding humidity and condensation. Excessive moisture inside the motorhome can cause water stains and mildew on the upholstery, the wall materials and the woodwork. Moisture condensing on the windows is a sure sign that the humidity inside your motorhome is too high. To reduce moisture inside your motorhome we suggest the following:

1. Open windows and vents. This will allow fresh air to flow through and reduce the moisture content.

2. Reduce moisture released inside the motorhome. Run the bathroom fan when using the bathroom and turn on the range hood fan while cooking. This will remove unnecessary moisture from your motorhome. Do not hang wet towels and swim wear inside the motorhome to dry.

# 10 ELECTRICAL SYSTEMS

Your motorhome is equipped with two electrical systems operating on separate voltages - a 12 Volt DC System and a 120 Volt AC System.

The 12 Volt DC System draws its power either from the engine's charging system while driving or from the coach batteries when parked. An isolator separates the two battery systems to prevent the engine batteries from being drawn down when parked and the coach system is in use.

The 12 volt system operates only through the 12 volt batteries. The batteries are being charged when the unit is plugged in and the charge circuit is switched on.

The 120 Volt AC System operates either from the optional 120 Volt generator installed in your motorhome or from the outside shoreline connection.

## 10.1 120 VOLT AC SYSTEM

When connected to an outside electrical utility such as that provided by most campgrounds or when running your 120 volt generator, the charger charges coach battery which provides 12v power. All equipment that normally is powered through the battery system is then powered through the converter preventing drain on the batteries.

Some equipment, however, depends entirely on 120 volts from an outside connection or from the optional 120 volt generator. These include:

1. Roof Air Conditioner
2. Refrigerator (when set to 120 volt)
3. Microwave Oven
4. All 120 Volt Electrical Outlets

### 10.1.1 EXTERNAL POWER CORD (SHORELINE)

The external utility power cord (also called the "shoreline") is stored in the compartment on the left (driver's) side of the motorhome.


Fig. 10-1 SHORELINE STORAGE

**WARNING**

Do not connect the external power cord until you have checked with the owner/attendant of the campground as to proper polarity and grounding.

Improper grounding or reverse polarity can cause component failure, injury or death.

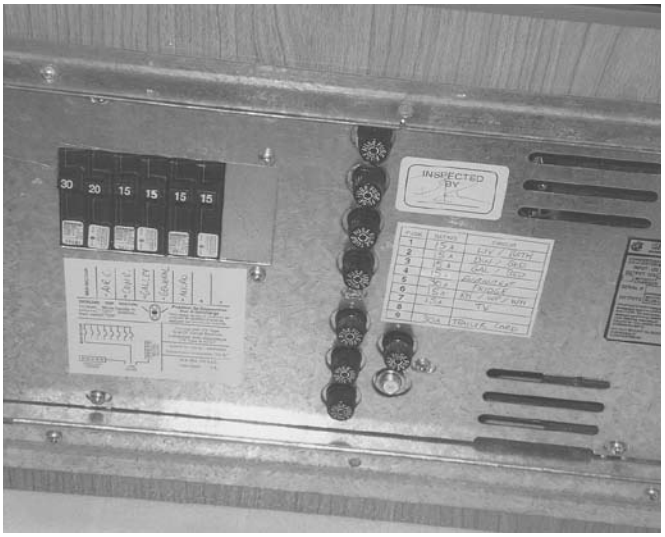
To connect your motorhome to an external power source, pull the cord through the cord hatch and plug it into the proper receptacle. Your motorhome is equipped with a 30-amp shoreline service.

Fig. 10-2 30 AMP PLUG

## 10.1.2 POWER CONTROL CENTER

This panel contains the fuses for the 12 volt system, circuit breakers for the 120 volt system and the converter that changes 120 volt power into 12 volt AC. Each system handles different circuits in the motorhome.

Under Dinette




Cover Removed

Fig. 10-3 POWER PANEL

## 10.1.3 120-VOLT CIRCUIT BREAKERS

The breaker panel protects all 120-volt equipment and components in the motorhome from overload, from a short in the wiring or a short in the component itself. This cuts off the flow of electricity in the system and prevents damage or fire.

If a breaker "trips", allow a brief "cool down" period and then reset the breaker by turning it OFF and then ON. If a breaker "trips" again and again, this could mean that there is a short in the wiring or in the equipment and both should be checked and serviced.

Refer to Converter and control panel manuals for more information.

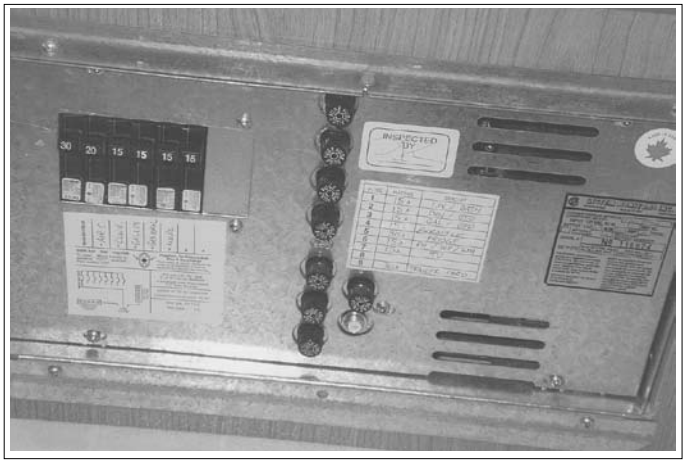


Fig. 10-4 120-VOLT CIRCUIT BREAKERS

There is a single 30 Amp main breaker which protects the entire electrical system. This breaker should be checked first if the entire electrical system will not function on shore power.

## 10.1.4 GROUND FAULT CIRCUIT INTERRUPTER (GFCI)

Various outlets in the motorhome, particularly those near sinks and water supplies, are connected to a GFCI which is a very sensitive circuit breaker that will protect you from electrical shock if a severe ground fault develops. If and when this breaker trips, unplug all appliances on that circuit and press the reset button on the outlet.

If the GFCI keeps tripping check and repair the electrical system before using it again.

Refer to Converter and control panel manuals for more information.

Depending on the floor plan in your vehicle, you will find a GFCI outlet in the bathroom and outside receptacle.

Fig. 10-5 GFCI OUTLET (TYPICAL)

**WARNING**

The GFCI will not eliminate completely all electric shock. Small children or persons with a heart condition should be extra cautious and could still be injured even though protected by a Ground Fault Interrupter.

## 10.2 AUXILIARY 120 VOLT GENERATOR (OPTIONAL)

Refer to the Generator Owner Operator's Manual for more detailed instructions.

### 10.2.1 GENERATOR SAFETY

1. Electrical:

**WARNING**

Extreme care and caution should be exercised when handling the generator and its components. Carelessness can be dangerous and even fatal.

Never touch any electrical leads, equipment or appliances when your hands are wet or when you are standing on wet ground or in water.

Any repair of the generator should be done by authorized service centers only. Never attempt to repair it yourself.

Plug in the power cord only when the generator is not running.

**WARNING**

Never check generator oil level while generator engine is running.

2. Asphyxiation:

**WARNING**

All internal combustion engines produce carbon monoxide (CO) gas fumes when running. This gas is poisonous, colorless, odorless, tasteless and lighter than air. These gases can readily be drawn into your motorhome. Take the following precautions when running any engines.

a. Do not run the generator and a ventilator fan at the same time. This could draw gases into the motorhome.
b. Do not open windows or ventilators on the side where exhaust pipes are located.
c. Park so that winds will carry gases away from the vehicle. Be aware of potential gas fumes from other nearby vehicles.
d. Do not operate the generator if there is any obstruction such as vegetation, snow, buildings, etc. which could deflect gas fumes under or into the motorhome.

IMPORTANT

Check the oil level regularly during frequent use of the generator. Refer to the Manufacturer's Manual for specific information.

## 10.2.2 GENERATOR REFUELING

Auxiliary generators draw their fuel from the main engine gasoline tank. The fuel pick-up tube is shorter than the engine pick-up tube. This prevents the vehicle fuel tank from being completely emptied on site. On motorhomes equipped with a diesel engine. A separate fuel tank is installed to provide gasoline for the generator. Check the generator fuel level frequently during heavy use. Refill as required to prevent running out of fuel.

**IMPORTANT**

Be sure to use the proper fuel. Errors in the fuel type can be hazardous and can create costly repairs.

## 10.2.3 GENERATOR OPERATION

1. Controls:
   The generator switch is located in the kitchen area.

Fig. 10-8 GENERATOR CONTROL

**IMPORTANT**

The generator starter does not draw current from the engine batteries so the ignition does not have to be on.

2. Starting:
   a. See Generator Manufacturer's Manual for specific instructions.
   b. Disconnect all electrical loads. (Turn off all lights, appliances, equipment, etc.).
   c. Press generator start button, hold until engine is running, then release.
   d. Allow the engine on the generator to start and run smoothly before operating electrical appliances.
   e. Be familiar with the output capacity and capability of your generator.
   f. Be careful not to overload the generator. See your manual for information on this.

**CAUTION**

Overloading the generator for long periods of time can cause high temperatures that could result in damage to the generator windings. Keep electrical loads within the wattage ratings specified in your manual.

3. Stopping:
   a. Turn off lights and all appliances before shutting off engine. Let the engine run at no-load for a few minutes to allow the engine to cool down.
   b. Press the generator start button and hold until engine comes to a complete stop.

## 10.3 12 VOLT DC SYSTEM

The DC voltage system in your motorhome consists of two separate and yet connected battery systems:

1. The automotive battery.
2. The auxiliary or motorhome battery.

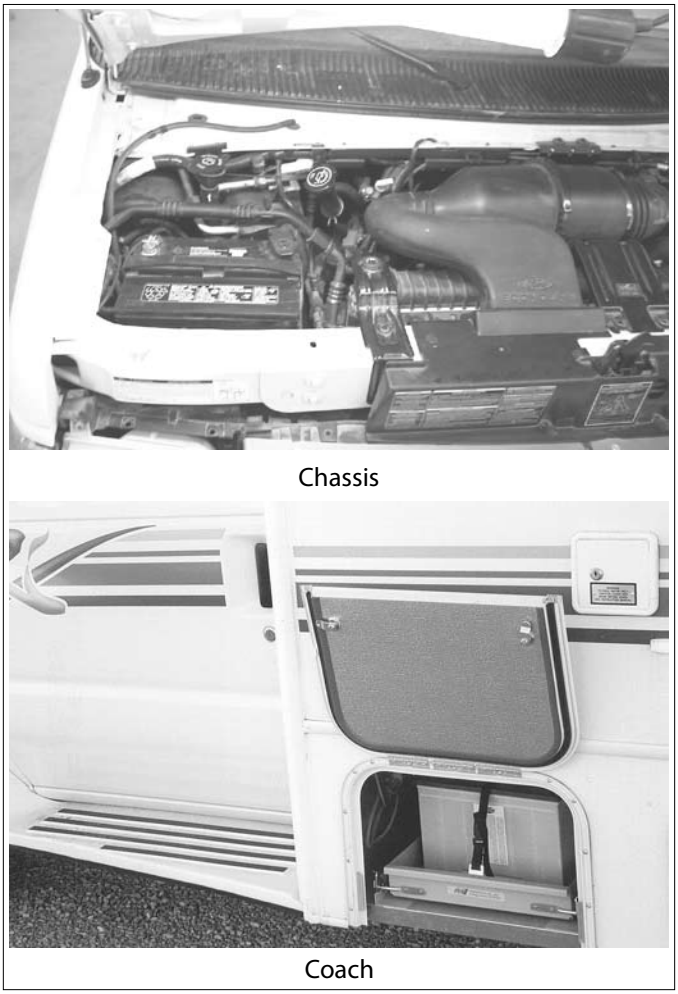
### 10.3.1 AUTOMOTIVE BATTERY

It is used to operate the starter, the automotive accessories and all the controls found on the instrument console. Included are the auto heater fans, the exterior lights, the horn, speed control, windshield wipers, etc..

It is recommended that the automotive battery cables be disconnected when parking for an extended period of time.

IMPORTANT

Removing battery cables from the automotive (chassis) battery can clear the engine/transmission logic modules. These modules will recalibrate themselves once the vehicle is reconnected and the engine started.



Chassis

Coach

Fig. 10-9 BATTERY LOCATION

### 10.3.2 AUXILIARY BATTERY

These supply power to all the 12-volt lights and equipment in the living area of your motorhome. Included in this would be vent and exhaust fans, refrigerator, 120-volt generator starter, water pump, furnace fan, interior lights, holding tank and water level gauges, etc.. These batteries may use to jump start your engine in case the automotive battery is dead. Refer to "Jump Starting" in this case.

This battery is a "deep cycle" RV battery designed to provide power over a long period of time and to stand up under the frequent drain and recharge conditions of a camping vehicle.

## 10.3.3 12 VOLT COACH FUSES

All 12-volt circuits are protected by either a circuit breaker or a fuse in the control panel. When a breaker trips or a fuse blows, shut off all appliances or lights on the affected circuit and reset the breaker or replace the fuse with a new one of the same amperage. The label on the panel identifies both the fuse amperage and the applicable circuit.

The fuse panel is located next to the circuit-breaker panel, below the dinette.

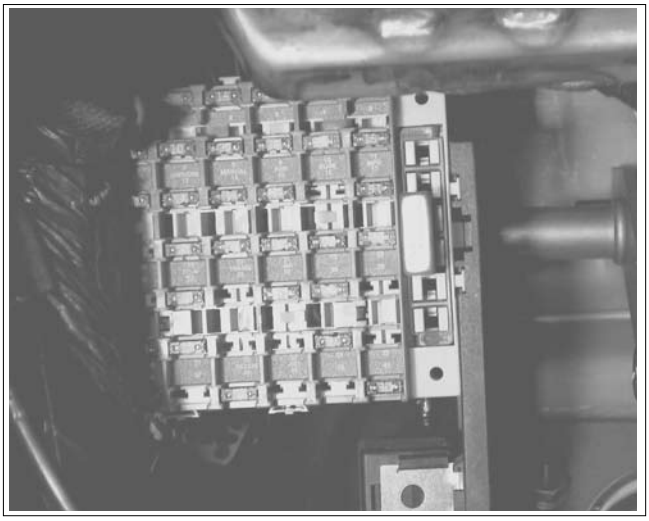


Fig. 10-10 FUSE PANEL

## 10.3.4 BATTERY MAINTENANCE

Automotive batteries are reservoirs of 12-volt electrical energy. Whenever energy is removed from the battery it has to be replaced in order for the battery to continue functioning. This energy is restored by the engine alternator whenever the engine is running or by the RV charging system when plugged into a 120-volt power source.

1. Problems:
   Two conditions can destroy the function of a battery. One is called sulphating in which a layer of sulphate crystals collects on the lead plates inside the battery. This can happen when a battery is not used for a long period of time (30 days or more) especially during warm weather. This situation requires replacement of the battery. The second is freezing. A battery must be kept at almost full charge to prevent the liquid electrolyte inside the battery from freezing.

2. Prevention:
   a. Disconnect the battery cables during long periods of storage.
   b. Hook up a battery charger at least once a month during long periods of storage.

3. Long Term Storage:
   If you do not intend to use your motorhome for a longer period of time it might be a good idea to remove the batteries from the motorhome and store them in a cool dry location on a wood or rubber pad. DO NOT store batteries on a moist concrete floor.

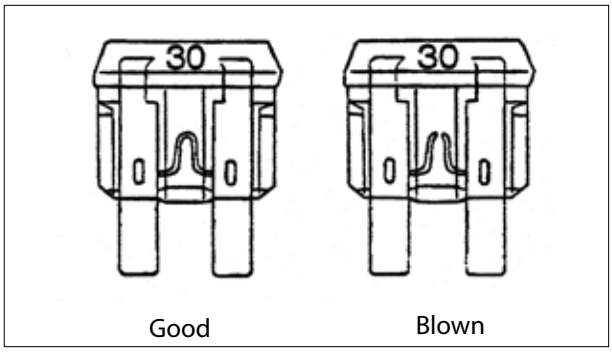


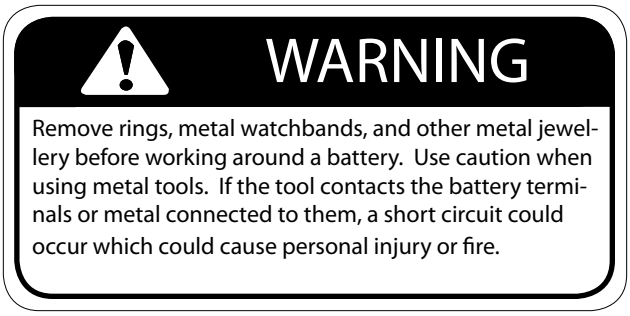

Fig. 10-11 FUSES

4. Additional maintenance suggestions:

**WARNING**

Do not allow battery electrolyte to contact skin, eyes, fabrics, or painted surfaces. The electrolyte is a sulphuric acid solution which could cause serious personal injury or property damage. Wear eye protection when working with batteries.

   a. Check the external condition of the battery monthly. Look for cracks in the cover and case.
   b. Make sure batteries are always securely fastened down.
   c. Make sure battery clamps are tight and free of corrosion.




d. Keep the battery and terminals clean. Accumulations of acid film and dirt may permit current to flow between the terminals and discharge the battery.
e. To clean the battery, wash it with a diluted solution of baking soda and water to neutralize any acid present, then flush with clean water. Foaming around terminals or on top of the battery is normal acid neutralization.

NOTE

Make sure you don't allow any baking soda solution to get into the battery. This can neutralize the battery acid.

f. Dry the cables and terminals before reinstalling them, and don't use grease on the bare metal inside the cable terminals to prevent corrosion. Grease is an insulator. Electricity will not flow through it. A plastic ignition spray will protect the terminals after you have cleaned and reinstalled them.
g. Whenever batteries are removed and replaced make sure the positive and negative cables are attached to the correct terminals. (Positive to positive and negative to negative). The same is true when using a "booster battery" or a charger. If you use a "fast charger", disconnect the cables from your battery. Do not attempt to recharge a frozen battery.
h. If you do not have maintenance-free batteries, check the battery fluid level and fill with distilled water if necessary. Do not overfill.
i. Have the specific gravity of the battery fluid checked when you have your vehicle serviced.

### 10.3.5 BATTERY CONDITION METER

On your control panel you will find a gauge which tells you the level of charge in your battery.

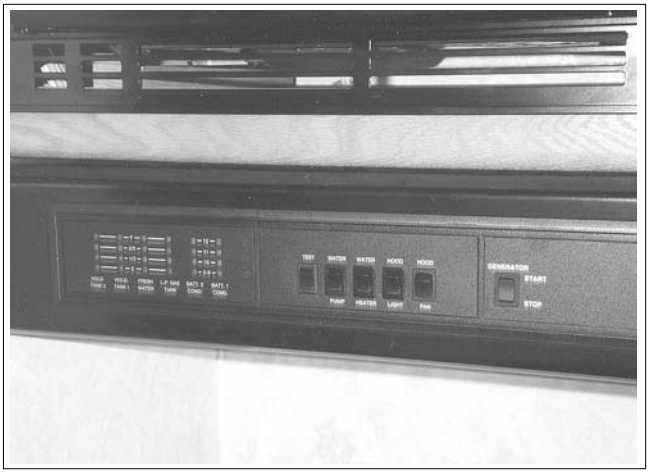


Fig. 10-12 BATTERY CONDITION METER

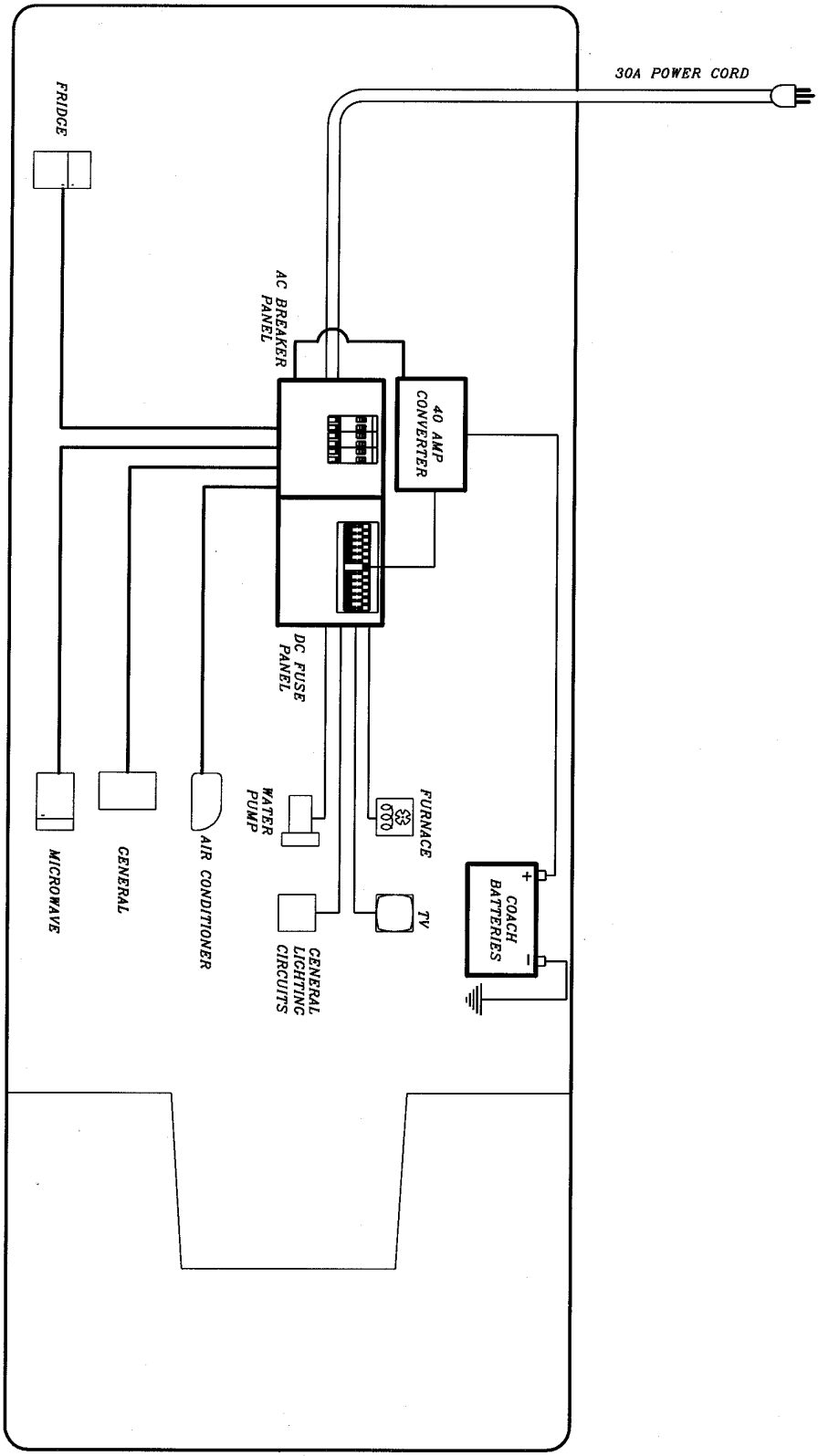
## 10.4 TRAILER WIRING CONNECTOR

Your motorhome is ready for trailer or car towing. It has a wiring connector plug at the back for quick hook-up.

Refer to the labeled diagram of the various terminals in the plug. These are standard for all 7-pin trailer plugs.

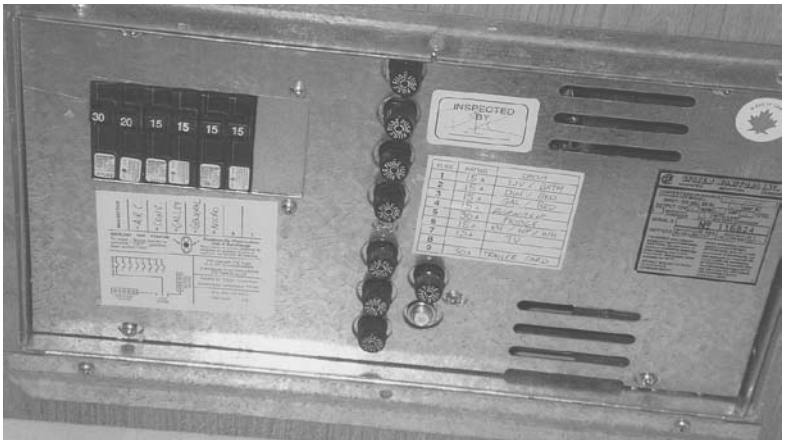
Fig. 10-13 TRAILER WIRING CONNECTOR

## 10.5 TYPICAL ELECTRICAL SCHEMATICS



## 10.6 FUSE PANEL

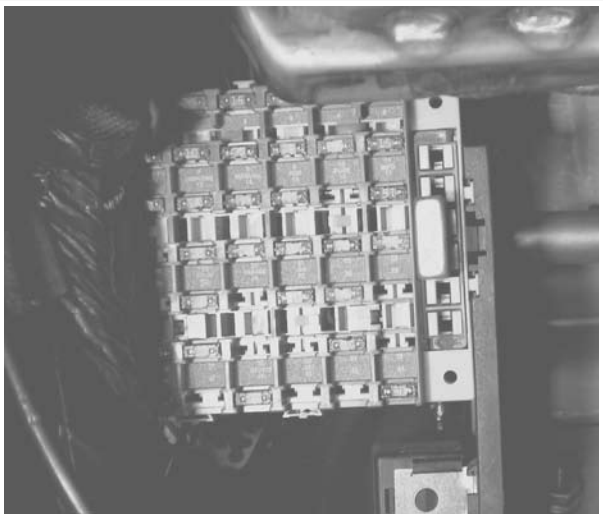
Location




Panel

Fig. 10-14 FUSE PANEL

### 10.6.4 VEHICLE



Panel

Fig. 10-15 VEHICLE FUSE PANEL

# 11 LIQUID PROPANE GAS SYSTEM

LP (Liquefied Petroleum) gas is a colorless gas compressed into liquid form for easy transportation and storage. It is the energy source for your range, oven, furnace, water heater, and an alternate source for your refrigerator.

It is an excellent fuel source and both safe and economical when used properly.

CAUTION

These instructions are provided as a general guideline only and may not be complete. To ensure proper service and safety, always take your motorhome to an authorized Triple E service center.

## 11.1 SAFE USE OF LP GAS

The LP gas system is designed and built to adhere to federal government and industry regulation requirements.

Many safety devices and backup systems have been built in to assure complete safety. Some of these include: tank overflow valves, LP gas detector, and carbon monoxide (CO) detectors. As well, LP gas contains an odor additive so that it can be more easily detected.

Observe the following precautions for the safe use of LP gas.

1. Familiarize yourself with the odor of LP gas. If you suspect a leak, turn off the LP gas supply immediately and determine the source of the leak with the help of qualified service personnel.

2. Do not tamper with any part of the LP gas system, piping or regulator. Service and maintenance should be performed only be qualified personnel.

3. Do not use natural gas in a LP gas system.

4. Check the entire system for leaks every time the tanks are filled. Take time regularly to inspect the system for leaks.

5. Turn off the LP gas supply valve when not using it.

6. The tank supply valve is designed to be tightened by hand only. If the valve requires a wrench for tightening it is defective and should be replaced.

7. Tanks should never be filled above the 80 % level. LP gas requires room to expand.

8. Make sure all appliance vents are open and free of obstruction when using the LP gas system.

9. Do not lock LP tank compartments. Recreational vehicle industry standards require that all LP gas valves must be readily accessible at all times in case of emergency.

10. When drilling holes in walls or attaching objects be careful not to damage any gas lines or electrical wiring.

## 11.2 SELECTING FUEL TYPES

Butane burns at a much higher temperature than propane but will not change from a liquid to a gas at temperatures below 32 degrees F or 0 degrees C. Propane, on the other hand, burns at a lower temperature and will continue to convert from a liquid to a gas at temperatures as low as -40 degrees F or -40 degrees C.

LP dealers will normally handle only the type of gas commonly used and suited to the climate in their area. If you travel from a warmer part of the country to a colder area you may want to check to make sure you have the right type of LP gas.

## 11.3 HOW LP GAS WORKS

There are two types of LP (Liquefied Petroleum) gas - propane and butane. Both are compressed into a liquid for easier transportation and storage. Common names used are tank gas, bottle gas or simply LP.

In the tank, LP is in the form of a liquid under very high pressure. As it is released, it changes to a vapor or gas and expands to a much greater volume.

Caution should be exercised when temperatures fall below -40 degrees C (-40 degrees F). You could be without propane at these lower temperatures.

## 11.4 LP TANK SYSTEM

The storage tank for the LP gas is mounted underneath the motorhome attached to the vehicle frame. It is accessible only from outside the vehicle. The tank valve is located near the top center of the tank next to the regulator. Before opening the supply valve, make sure all controls for the various appliances are in the OFF or PILOT OFF position. This is to prevent any LP gas from leaking into the motorhome.


Fig. 11-1 TANK LOCATION

## 11.5 LP TANK CAPACITY

The tank size is the approximate usable volume which is about 80% of the total tank volume.

| | Regency/Senator/Senator XL |
|---|---|
| Tank Size Gal (l) | 17.5 (66) |

Propane Tank Capacity

## 11.6 REFILLING LP TANK

The LP gas container is located in a compartment below the floor of the coach. Access is obtained by lifting the compartment door.

**WARNING**

1. Never overfill the LP gas tank. Make sure your vehicle is level when filling the tank.
2. Make sure all pilot lights are OFF before refuelling any of the gas tanks on your motorhome.
3. Do not smoke or have any open flame in the area where refuelling is taking place.
4. When testing for leaks in the LP system use a soap and water solution. Never use an open flame to test for leaks.
5. Never fill the LP tank when either the engine or the generator is running.
6. Keep all protective covers and caps in place.

Simply open the baggage door, and fill the container via the fill-in valve as indicated on the container.

**WARNING**

Do not smoke when refuelling. Keep flames, sparks and smoking material away from fuel or flammable fumes.

Shut off all pilot lights and the control valve on the LP gas container when filling the container and during travel. Always refill empty LP gas container as soon as possible.

Do not overfill your LP gas container. Stop filling when liquid appears at the overflow valve. (often called a 10% valve) which contacts the liquid level at 80% of container capacity allowing 20% for expansion.

Check after each filling by opening the overflow valve and bleed gas in well-ventilated area until white liquid stops. Overfilling may cause damage to regulator and cause malfunction of LP gas appliances.


a. Fill b. Vapor c. Overflow d. Outage

Fig. 11-2 LP GAS FILLER

IMPORTANT

The LP tank has an automatic 80% stop-fill device to prevent over filling of the tank.

The tank is permanently mounted to the motorhome frame. Therefore the vehicle must be taken to a fuelling station to be filled. When the liquid LP gas appears at the overflow valve, the tank is full.

LP gas stations are found in all parts of the country. Check the Yellow pages in your telephone book if you have trouble finding a station. Look under "Gas-Liquefied Petroleum-Bottled and Bulk" or "Propane".

**WARNING**

Remind the service attendant to use the 80% overflow valve when refuelling. Space must be left in the tank for vaporization and expansion.

Never carry LP or any other flammable liquid containers in your motorhome. Gases may inadvertently be discharged into the room which could result in fire or explosion.

After tank has been filled:

1. Check all container and line connections periodically to be sure they are tight. When testing for leaks, use soapy water (never a match). LP gas has a distinct garlic odor.

2. If gasoline or LP gas fumes are noticed at any time, the cause should be determined and corrected without delay. Always have methyl alcohol added to your container to prevent freeze-up.

3. Before opening the control valve at the LP gas container, check that controls for all gas appliances are in the off position. If this is not done, LP gas could accumulate inside the vehicle creating a fire or explosion hazard.

4. LP gas is also potentially lethal if inhaled.

## 11.7 AIR IN THE LP TANK

If your LP appliances burn poorly or do not stay lit even though you are sure you have plenty of fuel, you may have air trapped in the tank. The air will eventually escape along with the LP gas but it may be necessary that you have your tank purged of air by the LP gas dealer.

## 11.8 TRAVELLING LP GAS

In some jurisdictions it is illegal to transport LP gas on certain roads or through tunnels. Check state or provincial regulations to make sure your trip will not be halted or impeded unexpectedly as a result.

## 11.9 REGULATOR

The LP tank regulator has a plastic cover to protect it from the weather. This should never be removed except by qualified service personnel.

The pressure regulator has a vent hole on the underneath side. Make sure this vent hole is open and not obstructed in any way.

During freezing weather it may happen that a regulator may freeze up. This results from a small amount of moisture in the fuel even though every precaution is taken by gas dealers to prevent this from happening. To help avoid this situation, keep the control valve closed when not in use even when the tank is empty. This helps prevent condensation from forming. Hold a light bulb near the regulator to thaw it.

**WARNING**

Do not use an open flame or a heat lamp to thaw out regulator.

If moisture in the tank is a recurring problem, you may ask your LP gas dealer to inject a small amount of dry methyl alcohol into the tank to absorb the moisture.

Liquid Petroleum vaporizes quickly and easily at warmer temperatures. Under cold conditions this process slows down dramatically. When large amounts of fuel are required when using the furnace, for example, the fuel may not vaporize rapidly enough to keep all the appliances going at a high level. In this case you may have to reduce the consumption of fuel by lowering the temperature setting on the furnace, reduce the consumption of hot water, turn up the temperature setting on your refrigerator or switch from LP to electric where possible.

The regulator is preset. Do not attempt to adjust it. This should only be done by an authorized service outlet. The regulator should not be exposed to the elements.

If regulator fails: LP gas container may be overfilled, or there may be impurities in the propane. Regulator failure could cause LP gas compontents to malfunction.

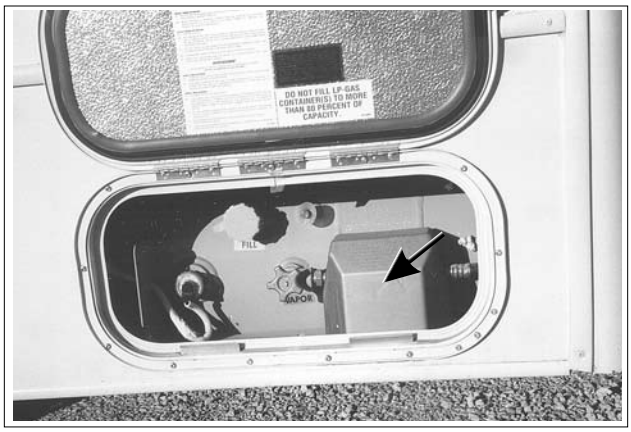



Fig. 11-3 REGULATOR

## 11.10 LP GAS LEAKS

Notice the label placed near the range area. If you ever smell LP gas in the vehicle or the detector alarm sounds, follow the instructions carefully.

**WARNING**

IF YOU SMELL GAS

1. Extinguish any open flame, pilot lights and all smoking material.
2. Do not touch electrical switches.
3. Shut off the LP tank valve.
4. Open doors, windows and roof vents.
5. Leave the area until the odour is gone.
6. Have the system checked for leaks and make the necessary corrections and repairs.

**WARNING**

Do not bring or store LP gas containers, gasoline, or other flammable liquids inside the vehicle because a fire or explosion may result.

## 11.11 LP GAS DETECTOR

A standard LP gas detector has been installed in your unit.

NOTE

It is not equipped with an automatic propane shut-off valve.

Please refer to manufacturer's manual for further instructions.

**WARNING**

It is not safe to use cooking appliances for comfort heating. Cooking appliances need fresh air for safety operation. Before operation:

1. Open overhead vent or turn on exhaust fan.
2. Open window.

This warning label has been located in the cooking area to remind the user to provide an adequate supply of fresh air for combustion. Unlike homes, the amount of oxygen supply is limited due to the size of the recreational vehicle, and proper ventilation when using the cooking appliance(s) will avoid dangers of asphyxiation. It is especially important that cooking appliances not be used for comfort heating as the danger of asphyxiation is greater when the appliance is used for long periods of time.

Fig. 11-4 LP GAS DETECTOR

# 12 WATER/PLUMBING SYSTEM

Your motorhome is designed with a fresh water, grey water, black water and associated plumbing to handle all of the water and waste requirements. Review this section carefully to understand each system and how they function together.

## 12.1 FRESH WATER SYSTEM

There are two sources for fresh water in your motorhome:

1. A water tank located within your motorhome.
2. By connecting to "city water" by means of a water hose.

Both can supply water to the sink, shower, bathroom toilet and the water heater.

The water system built into your motorhome provides full service similar to the system used in your home. A 12-volt self-priming pump draws water from the fresh water storage tank to all cold faucets and the water heater. An automatic pressure switch, located in the water pump maintains a positive line pressure.

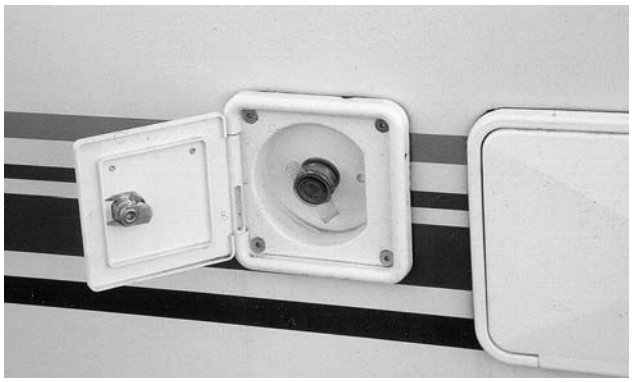
Fig. 12-1 DRIVERS SIDE

All fresh water components and fittings are accessible from the drivers side of the motorhome.

a. Tank Fill - Gravity
b. City Water

## 12.1.1 FRESH WATER TANK FILLING PROCEDURE

The water tank is not a pressure vessel. The filling procedure is done via a water pressure system and cannot be done without available water under pressure. Make sure the vent/overflow drain located underneath the tank area is open, free and clear of any obstruction before attempting to fill the tank. A blocked vent during filling could cause serious damage to the tank and even the underfloor structures.



Compartment

Fig. 12-2 PRESSURIZED WATER-TANK FILLING

When filling fresh water tank:

1. City Water Supply:
   a. Connect water hose to the city water inlet connection.
   b. Set pump switch, for the motorhome system, to the off position.
   c. Open source of water supply valve.

   IMPORTANT

   By closing the overflow valve and leaving pump off, the city water supply can be used to pressurize the system.

   d. Check the Monitor System inside the motorhome for levels as the tank is filling. When the tank is close to full, check for overflow at the above-mentioned drain.
   e. Turn the supply off as soon as water flows from the drain.

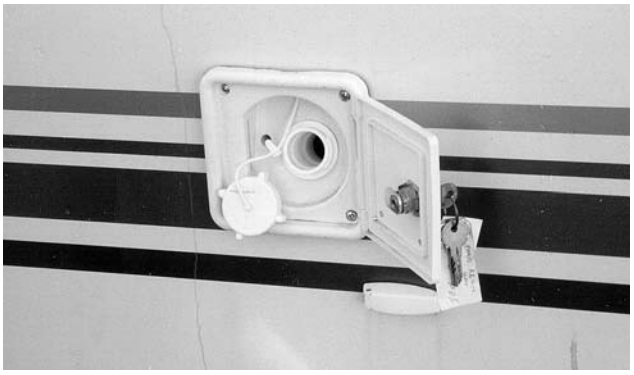
   IMPORTANT

   Never allow a full flow at the overflow.

   f. Turn pump switch back on and the system is ready to be used.

   IMPORTANT

   If you are starting from a dry system or if some faucets have been open during the tank filling procedure, you may want to slowly open all faucets one at a time to allow any trapped air to escape from the system.



Compartment

Fig. 12-3 NON-PRESSURIZED WATER-TANK FILLING

2. Non-Pressurized Water Supply:
   a. Set pump switch to the off position.
   b. Open gravity fill fitting compartment.
   c. Insert funnel or hose into intake.
   d. Add required amount of fresh, clean water. Do not overfill.
   e. Close fitting and and lock compartment.

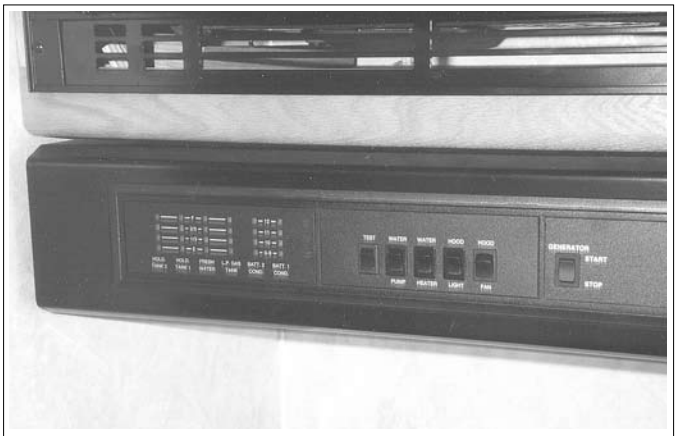
## 12.1.2 WATER PUMP

The water pump is designed to supply water from the fresh water tank to the various areas of your motorhome on demand. When a faucet is opened, the pump comes on automatically and pressurizes the various water lines.

## 12.1.3 WATER PUMP SWITCH

The master switch for the water pump is located on the range hood. When this switch is in the on position, the pump will automatically activate when any faucet, shower or toilet is being used.

It is recommended that the pump switch be turned off whenever leaving the motorhome for any period of time or while driving. A slow leak in a faucet or connection could drain both the water tank and the battery.




Master - Control Panel

Fig. 12-4 WATER PUMP SWITCHES

## 12.1.4 WATER PUMP FILTER

Before water can enter the various outlets in your motorhome it has to flow through a water filter. This filter is located between the fresh water tank and the water pump.

Check the water filter periodically and clean or replace it at least annually to assure a clean supply of water.

## 12.1.5 WATER SYSTEM DRAINS

The water system is designed with drain lines and valves for draining the system. Open both valves to completely drain the system, close the valves before refilling the system.

Fig. 12-5 DRAIN VALVES

## 12.1.6 WATER PUMP INITIAL START-UP

1. Make sure all drain valves are closed including the water heater valve.
2. Turn water pump switch off.
3. Fill water tank.
4. Open faucets, both hot and cold.
5. Turn pump switch.
6. Close each faucet (cold and hot) as soon as water flows steadily.
7. Check to see that pump stops after all faucets are closed.
8. Pump is now ready for automatic operation. It will start whenever a faucet is opened.

## 12.1.7 WATER PUMP

### TROUBLESHOOTING

1. If pump will not prime:
   a. Make sure there is water in the tank.
   b. Make sure the battery is not run down.
   c. Make sure there are no kinks in the inlet hose.
   d. Make sure all inlet fittings and connections are air tight.
   e. Make sure water selector valve in the utility compartment is set to normal.
   f. Check for clogged lines.

2. If water pressure drops:
   a. Check faucets and connections for leaks.
   b. Make sure faucet aerators and filters are clean.
   c. Make sure there is water in the tank.
   d. Make sure battery is not run down.

3. If pump runs when there is no apparent demand for water:
   a. Make sure all faucets and fixtures are shut off and are not leaking.
   b. Check all lines for leaks.
   c. Make sure there is water in the tank.
   d. Make sure no air is trapped in the system.
   e. Make sure the tank fill water selector valve is set to normal.

## 12.1.8 DISINFECTION OF WATER TANK

It is recommended that fresh water systems be disinfected.

1. When the system is new and has not been used before.

2. When it's been in storage for a long period of time.

3. In case it has become contaminated.

4. Disinfection instructions:
   a. Prepare a solution of 1/4 cup household bleach to 1 gallon of water. Pour this solution in to the water tank, 1 gallon for every 15 gallons of tank capacity.
   b. Fill the tank with fresh water. Run water from each faucet, hot and cold, until you detect a chlorine odor.
   c. Leave this solution in the system for at least 4 hours. If you wish to complete this procedure in 1 hour, double the concentration of household bleach in your solution.
   d. After the time has elapsed, drain and flush the system with fresh water.

## 12.1.9 EXTERNAL WATER SUPPLY

The external water source will supply your motorhome water system with water at city pressure when the water pump is switched off.

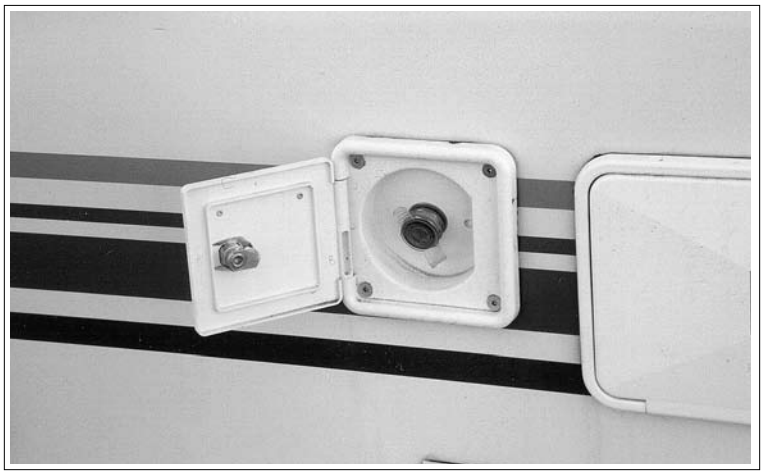


Fig. 12-6 WATER CONNECTION

1. Connecting:
   a. Turn water pump switch to off.
   b. Attach garden hose to city water connection. Turn the water selector valve to city water.
   c. Turn on external water supply.

IMPORTANT

After connecting to the external water supply, open the faucets in your motorhome slowly and cautiously. Air trapped in the line can cause the water to splash into the sink. You may want to drape a wash cloth over the faucet to prevent excessive splashing.

Fig. 12-7 BYPASS VALVE

2. Turn the water heater by-pass valves to normal to be sure that water enters the heater and hot water is available for motorhome use.

   Water from the external supply is prevented from entering the water tank and the water pump by means of a check-valve.

IMPORTANT

Some campgrounds have an excessively high water pressure which can cause problems. It is a good idea to get a pressure reducer from your RV center and attach it to your incoming external water supply hose to ensure safe pressure for your unit.

3. Disconnecting:
   a. Turn off the external water tap.
   b. Relieve water pressure on the line by opening a faucet in the motorhome.
   c. Disconnect hose from the motorhome.
   d. Replace the protective plug back over the water connection.

## 12.2 WASTE SYSTEMS

### 12.2.1 GREY WATER - WASTE HOLDING TANK

The drainage from the kitchen sinks, bathtub and shower pan is collected in a separate grey water holding tank. This tank has its own dump valve but ties into the same termination valve outlet as the waste holding tank.

**IMPORTANT**

If grey water holding tank is allowed to overfill, the overflow may back up through the shower drain.

Drain grey water holding tank in the same way after draining the waste holding tank. This will help flush solids out of the sewer hose.

### 12.2.2 BLACK WATER - WASTE HOLDING TANK

The black water holding tank collects all the waste from the toilet and vanity sink. Before using your waste holding tank, deoderize it by adding one gallon water and a commercial holding tank deoderizer through the toilet.

**IMPORTANT**

If holding tank is allowed to overfill, the overflow may back up through the toilet drain.

## 12.2.3 DUMPING HOLDING TANKS

When dumping holding tanks:

1. Remove drain hose from storage compartment.

2. Remove dust cap from drain outlet. Attach drain hose securely.

3. Place the other end of the hose in sewer opening.

4. Make sure hose is lying flat. Open black water (on curb side) valve with a quick pull. Move hose about gently to ensure flow of waste materials. When tank is empty, close valve.

5. After tank has been drained, run several gallons of fresh water into the black water tank through the flush fitting (optional). Open the dump valve to flush out any residual wastes. After the tank has been drained again, close the valve, secure compartment.

**NOTE**

Do not open the grey water valve until black water valve is closed. This will prevent any black wastes from entering the grey water tank. Grey water also rinses out any black water residue from inside the drain hose.

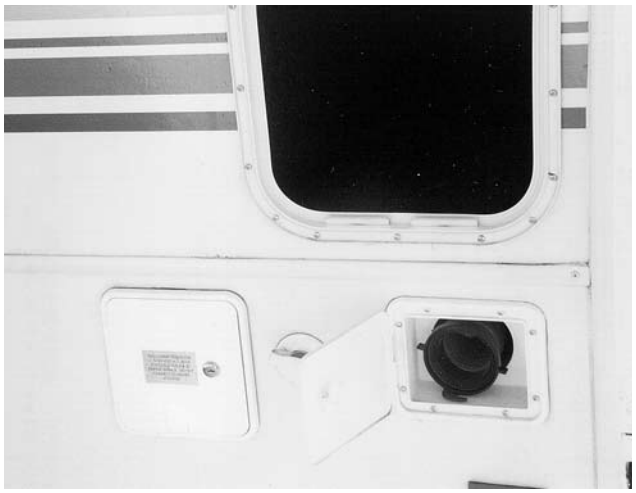
6. Open grey water valve (driver's side). Close as soon as tank is empty.

7. Add an odor control chemical to the black water holding tank. These are available at any RV center.

8. Rinse the sewer hose thoroughly and store.

**IMPORTANT**

Holding tanks should be dumped before travelling to eliminate unnecessary weight while driving.



Storage

Drain

Outlet

Fig. 12-8 DRAIN HOSE

Fig. 12-9 BLACK WATER VALVE - CURB SIDE

Fig. 12-10 GREY WATER VALVE - DRIVER'S SIDE (28XL ONLY)

## 12.2.4 DO'S AND DON'TS HOLDING TANKS

1. DO keep your holding tank clean using any cleaner approved for recreational vehicle sanitation systems.

2. DO add a special deodorizer or chemical additive approved for recreational vehicle systems to sanitize and improve the tank action.

3. DO keep your tank termination valve closed, permitting the tank to get as full as convenient before emptying.

4. DO keep both the tank termination valve(s) and the drain cap tightly in place when travelling to permit use of the system when on the road.

5. DO use any soft, single-ply, non dyed, biodegradable toilet tissue.

6. DO open the bath vent to keep bathroom fresh.

7. DON'T put facial tissues, paper, permanent (automotive) anti-freeze, sanitary napkins, or household toilet cleansers in your holding tank.

8. DON'T put anything solid in your holding tank which can scratch or damage the plastic.

## 12.2.5 USING ON-SITE SEWER HOOK-UPS

When staying at a campsite for any period of time and providing that sewer hook-ups are available, the sewer hose may be attached and left in place for the duration of the stay.

However, make sure that dump valves are left closed and are opened only once the tanks are full or when you leave the campsite. This will keep solid wastes in suspension allowing them to drain with the liquids when the valves are opened. If the valves are left open, the liquid wastes will drain leaving the solids to collect on the floor of the black water holding tank.

Should this happen, close the valves, fill the tank with water and drive a few miles. A 1/4 cup of dishwater detergent added to the tank will help to clean it. The motion of the vehicle and the water will dislodge the wastes and allow the tank to be drained in the normal manner.

### 12.2.6 HOLDING TANK LEVEL INDICATORS

The holding tank levels may be checked on the monitor panel. Press the corresponding switch to check the level in each tank.

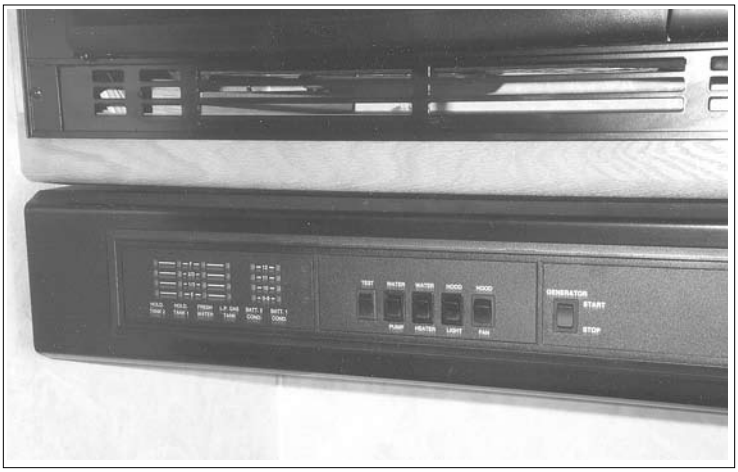


Fig. 12-11 TANK LEVEL INDICATORS

### 12.2.7 TANK CAPACITIES

| | Regency/Senator | Senator XL |
|---|---|---|
| Fresh | 36 (136) | 36 (136) |
| Grey | 32 (243) | 32 (243) |
| Black | 32 (243) | 32 (243) |

Tank Capacities

## 12.3 PLUMBING SYSTEM OPERATION

### 12.3.1 WATER HEATER

The motorhome is equipped with a 6 gallon water heater. The water may be heated in one of three ways:

1. With an LP gas burner.
2. With a 120-volt heating element (optional)
3. With an automotive engine heater while driving. (optional)

1. LP Gas Operation:
   To ignite the heater, set the waterheater switch located on the range hood.

IMPORTANT

Be sure there is water in the hot water tank to prevent burning out the heating element when the power is turned on.

Fig. 12-12 WATER HEATER SWITCH

CAUTION

Should you ever develop a leak in the engine cooling system, do not forget to check the motor aid water heater supply hoses and connections for leaks in addition to the regular cooling system area.

2. Operating Features:
   a. The water heater is equipped with a preset water temperature control. The burner will bring the water temperature up to the desired level and then automatically shut off.
   b. It is also equipped with a temperature cut-off device in case the water temperature exceeds the preset limit. The breaker will trip and shut down the burner. Before the burner will restart, the breaker will have to be reset. If it continues to trip, have the unit checked and serviced. Refer to manufacturers operating instructions included in the information package.

## 12.3.2 TOILET

Refer to manufacturer's operating instructions included in information package for more details.

Troubleshooting:

1. Water keeps running into the bowl:
   Check to see that the levers return all the way to the left. Sticking may be caused by foreign material on the waste valve blade or blade seal at the bottom of the bowl. If problem persists, replace water valve.

2. Toilet leaks, there is water on the floor:
   If the leak is in back of the toilet, check the water supply line connection and refer to the installation instructions. If the leak is at the closet flange area, check the closet flange nuts for tightness. If leak continues, remove the toilet and check the closet flange height. The height should be between 1/4" and 7/16" above the floor. Adjust accordingly and replace the closet flange seal if damaged.

3. Poor Flush:
   The levers must be held fully open during the flush. A good flush should be obtained within 2 to 3 seconds. If the problem persists, remove the water supply line and check the water supply. The water supply line flow rate should be at least 10 liters per minute to ensure an adequate flush.

## 12.3.3 SHOWER

To protect the surface of your ABS plastic shower pan, it is recommended that a rubber shower mat be placed in the shower pan.

Use a non-abrasive cleaner to clean your shower compartment. Do not use highly concentrated or high acid content household cleaners, as these may damage the shower compartment.

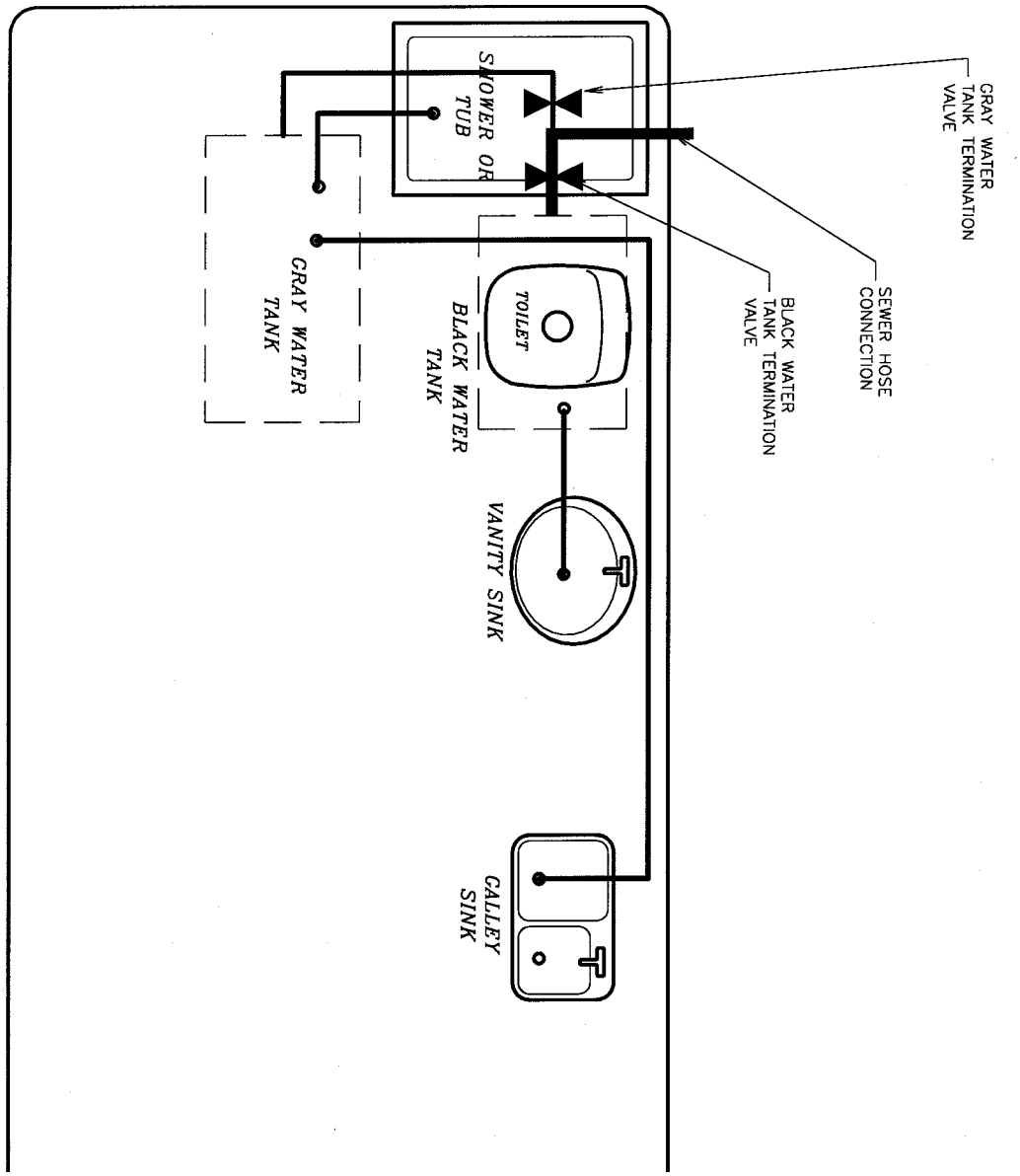
## 12.4 PLUMBING SPECIFICATIONS

### 12.4.1 TANK CAPACITIES

| | Regency/Senator | Senator XL |
|---|---|---|
| Fresh | 36 (136) | 36 (136) |
| Grey | 32 (243) | 32 (243) |
| Black | 32 (243) | 32 (243) |

Tank Capacities

### 12.4.2 TYPICAL PLUMBING SCHEMATICS DRAINAGE SYSTEM



# 13 APPLIANCES AND INTERIOR FEATURES

Refer to the operator's manuals in the information package for more detailed instructions if required for each appliance, component or system.

## 13.1 REFRIGERATOR

The refrigerator in your motorhome can be operated on either:

1. 120-volt AC electric.
2. LP gas with 12-volt ignition.

It is very important that your motorhome be level when parked so that the refrigerator will operate safely and properly.

CAUTION

If the motorhome is parked off-level by 3 degrees or more side-to-side or 6 degrees or more front-to-back for more than an hour, permanent damage could be done to the refrigerator.

When you park your motorhome, normal levelling for comfortable living will usually place it within satisfactory level limits. Use a level to make sure.

When the refrigerator is not being used for any length of time the temperature setting should be turned to the lowest level and switched to off. The door should be opened slightly to allow for air circulation and to prevent any odor or mold build-up.

### 13.1.1 OPERATING INSTRUCTIONS

Read the Refrigerator Owner's Manual carefully for complete instructions on start-up, operating and shut-down instructions.

Fig. 13-1 REFRIGERATOR

### 13.1.2 OPERATING TIPS

1. The refrigerator should be cold before placing items in it.
2. Try not to put warm or hot items in the refrigerator. Allow them to cool off first.
3. Do not pack refrigerator too full. To operate efficiently, the refrigerator needs air to circulate.
4. Use smaller containers to store items i.e. 1 litre rather than 4 litre.
5. Use containers that seal tightly.
6. Use crumpled paper between containers to prevent rattling while driving.

### 13.1.3 EXTERIOR REFRIGERATOR COMPARTMENT

This compartment allows access to the refrigerator for cleaning, inspection, maintenance and service. It is a good practice to open the compartment door once in a while to make sure that the area is clean and free of any debris that might hinder air circulation.

Fig. 13-2 OPEN COMPARTMENT

## 13.2 RANGE AND OVEN

Both the range and the oven operate on LP gas. The oven has a pilot light which must be lit in order to start the oven from the pilot light.

**WARNING**

Never use the range burners to heat the interior of your motorhome. Heed the warning label in the cooking area.

Always make sure you have adequate ventilation when the burners are operating.

### 13.2.1 LIGHTING BURNERS

To Light The Range:

1. Turn the burner control knob to "on".
2. Turn the piezo ingition knob until the burner ignites. If the burner does not ignite within 10 seconds, turn the burner control knob off: wait 5 minutes and try again.
3. Adjust the level of the flame by turning the control knob.

Fig. 13-3 KITCHEN

**WARNING**

Turn the igniter knob immediately after turning the burner on to prevent a gas build-up. Excess gas can cause a flare-up when lit.

## 13.2.2 SAFETY TIPS

1. Always wait 5 minutes before relighting range/ oven to allow gas to dissipate.

2. The range/oven is not designed for and should never be used as a space heater.

3. Do not operate range/oven while travelling or while refuelling your vehicle at a gasoline service station. The burners may ignite gasoline fumes.

4. Do not leave the top burners on without a utensil for any length of time. Overheating the grates may cause the porcelain enamel to crack and chip.

5. Any time the range/oven is in operation, the power range hood fan should be operating to help ensure proper ventilation.

## 13.2.3 RANGE HOOD

The range hood fan operates on 12-volts and should be used whenever the range or oven is being used. This will aid in removing cooking odors, steam, fumes and help keep the air in the motorhome fresh. Keep the filter clean by washing it regularly with hot soapy water. Let it dry thoroughly before replacing it.

## 13.2.4 LIGHTING OVEN PILOT

1. Make sure all range and oven valves are in the off position.

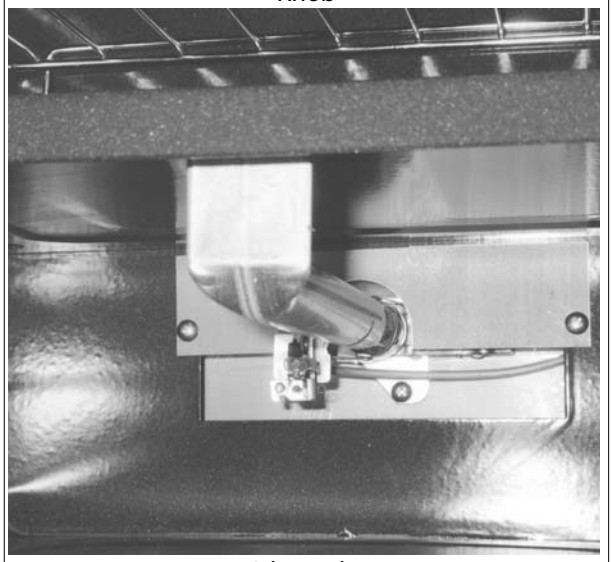
3. Press and turn the oven control knob to the "pilot" on position. This opens the gas flow to the oven pilot.

IMPORTANT

If the oven has not been used for some time it may take a few minutes for the gas to reach the pilot.

4. Open the oven door and light oven pilot. You will notice a small flame at the oven element.

Knob



Pilot Light

Fig. 13-4 OVEN PILOT LIGHT

### 13.2.5 OPERATING OVEN CONTROL

To adjust the oven temperature, push in the knob and turn it counterclockwise to the desired temperature setting. There may be a delay of 45 seconds before the burner is ignited. This is normal. To keep the oven temperature at the set temperature, the burner will cycle on and off.

### 13.2.6 SHUT DOWN INSTRUCTIONS

When finished using the oven, turn the oven control knob back to pilot on. The pilot light will remain on and the oven can be used at any time by simply adjusting the temperature setting.

When travelling or when the motorhome is not in use for any length of time, turn the oven control knob to off and turn off the main gas supply.

## 13.3 OPTIONAL MICROWAVE OVEN

For complete instructions, refer to the manufacturer's manual.

Operating Tips:

1. Do not attempt to operate microwave oven with the door open since this can result in harmful exposure to microwave energy.

2. Do not defeat or tamper with the safety interlocks.

3. Do not place any object between the oven front face and the door or allow soil or cleaner residue to accumulate on sealing surfaces.

4. Do not operate the oven if it is damaged. Do not operate if the oven door does not close properly (bent) or there is damage to the hinges and latches (broken or loosened) or the door seals and sealing surfaces.

5. The oven door should not be adjusted or repaired by anyone except qualified service personnel.

Fig. 13-5 MICROWAVE OVEN (TYPICAL)

## 13.4 MONITOR PANEL

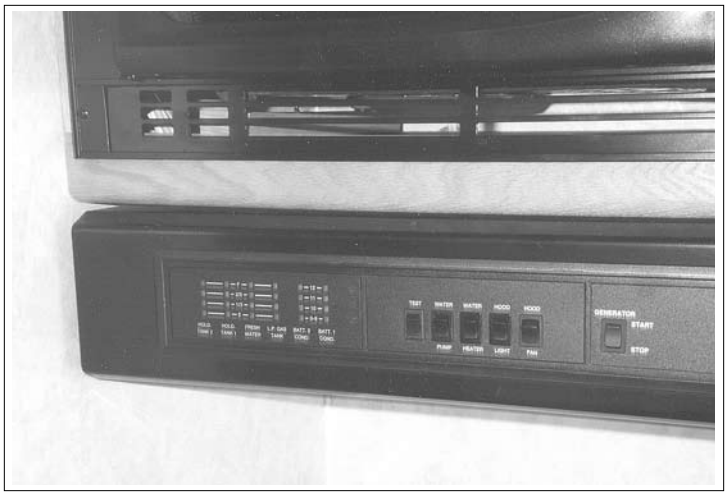


Fig. 13-6 MONITOR PANEL

The monitor panel covers four systems in your motorhome:

1. Battery:
   Indicates the level of charge in the auxiliary battery.

2. Propane:
   Indicates the level of propane in the propane tank.

3. Fresh Water:
   Indicates the amount of fresh water in the fresh water tank.

4. Holding Tanks:
   Indicates the amount of waste in the grey water and black water holding tanks.

To check the level for any of the systems, press the button for the system you are checking and read the level.

**CAUTION**

Do not allow the holding tanks to overfill as this could cause waste to back up through the toilet or the bathtub/shower drain.

**IMPORTANT**

The master switch for the water pump is also located on the monitor panel.

## 13.5 WATER HEATER BYPASS VALVE

See Section 17.2 for cold weather preparation instructions.

Fig. 13-7 BYPASS VALVE

## 13.6 LP GAS FURNACE

The furnace(s) should not be operated when the vehicle is underway, and the LP gas should be turned off at the LP container any time the vehicle is operated on public roads.

The furnace is controlled by the thermostat located in the galley.

The furnace(s) has no pilot light but is ignited by a direct spark ignition system. No manual lighting is required.

1. To Start Up:
   a. Close the LP gas tank valve.
   b. Slide the thermostat switch from off to heat.
   c. Set the thermostat above room temperature to start the blower. There will be a slight delay before the blower comes on. Allow the blower to run for 5 minutes to purge the combustion chamber.
   d. Move thermostat lever below room temperature. The blower will continue running for about 2 minutes.
   e. After the blower stops, open the LP gas tank valve.
   f. Set thermostat to desired temperature. If set above current room temperature, the blower will come on.
   g. After about 30 seconds, the automatic ignition device will light the burner. Do not attempt to light the burner manually.
   h. There should be warm air coming from the heating ducts. If the burner fails to light, repeat steps a - e.
   i. If the burner fails to ignite after 3 attempts, slide the thermostat to the off position, close the LP gas tank valve and contact your dealer or a local RV service center.

2. To Shut Down:
   a. Slide the thermostat to the off position.
   b. Close the LP gas tank valve.

For additional information and instructions, refer to the furnace manufacturer's manual.

Fig. 13-8 FURNACE CONTROLS

**IMPORTANT**

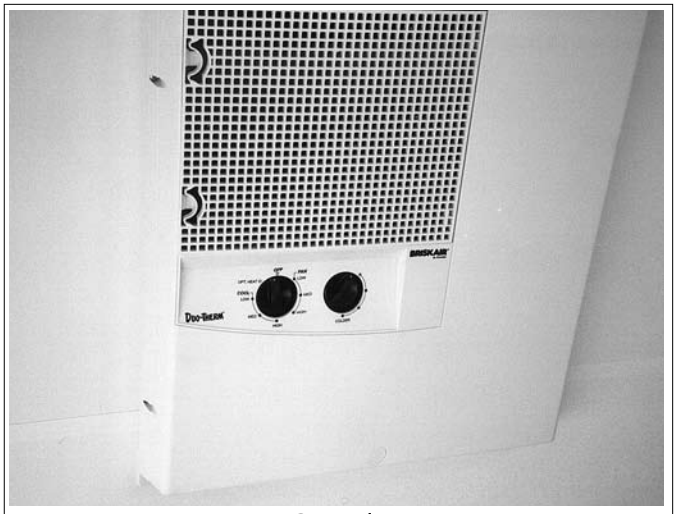
After the initial start-up the furnace will automatically cycle on and off as it delivers the required heat. The thermostat should be in the heat position.

## 13.7 ROOF AIR CONDITIONER

The roof air conditioner is controlled by the climate control center. Adjust the control to cooling. Select the temperature and the fan speed to suit your needs.

1. Maintenance:
   We recommend that the filters be cleaned or changed at least every two weeks when the air conditioner is in operation. Do not operate your air conditioner without the filter installed.

2. Cleaning and/or Changing Filters:
   a. Remove the filters by pressing the 2 retainer clips and remove the plastic grill. The filter is kept in place by the 4 corner pins.
   b. Remove filters and wash them in warm soapy water. If they are excessively dirty, replace them with new filters.
   c. Replace filters by removing the plastic grill. Make sure the corner pins hold the filter in place.



Controls

Location

Fig. 13-9 AIR CONDITIONER

## 13.8 CABLE TV HOOK-UPS

## 13.9 DC-AC ELECTRICAL VOLTAGE CONVERTER

See the separate instruction manual in your information packet labelled converter.

The converter is located under the dinette seat.

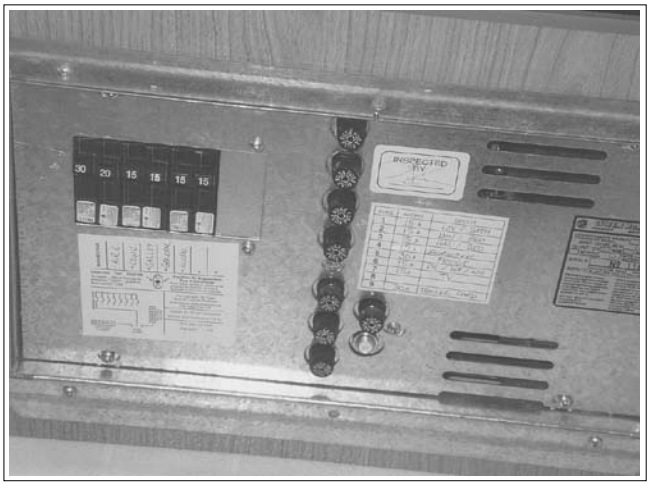


Fig. 13-10 CONVERTER

## 13.10 SLEEPING FACILITIES

**WARNING**

Do not use sleeping facilities while motorhome is in motion.

1. Bedroom:
   Standard sleeping facilities with a bed are located at the rear of the coach.

2. Rear Auxiliary Heater Control (XL Only):
   A rear heater is located under the bed. This heater will only generate heat when the chassis engine is running. The control for this heater is located as shown and is push/pull activated.


Exterior

Bedroom

Bedroom

Control

Fig. 13-11 REAR HEATER

3. Dinette:
   The dinette also can be converted into a bed:
   a. Remove cushions.
   b. Lift table and remove the table legs.
   c. Drop table between seats so that the edge of the table rests on seat edge supports.
   d. Arrange cushions to form a bed, placing larger cushions in the center.

To convert back to a dinette, reverse the above instructions.

Dinette

Bed

Fig. 13-12 DINETTE/BED

## 13.11 SEATS

To move the chairs forward or backward, use the lever located on the front of the chair beneath the skirt.

To swivel the chairs, pull on the lever located under the frame on the right hand side.

CAUTION

These chairs are not equipped with seatbelts and are not approved for use while travelling.

Fig. 13-16 CHAIRS (TYPICAL)

## 13.12 SEAT/SHOULDER BELTS

1. Inspection:
   Twice a year check that belts, buckles, latch plates, retractors and anchorages work properly: look for loose parts or damage (without disassembly) that could keep the restraint system from doing its job. Have a belt assembly replaced if the webbing has been cut or otherwise damaged. Also restraint systems should be replaced and anchorages properly repaired if they were in areas damaged by a collision, whether the belt was in use or not. If there is any question, replace the belt system. Damage whether visible or not, could result in serious personal injury in the event of an accident.

2. Maintenance:
   a. Hand wash webbing with warm water and mild soap. Rinse thoroughly and dry.
   b. Do not bleach or re-dye webbing, since it could become severely weakened by this process.
   c. Inspect seat belt assembly regularly. If the assembly does not operate properly or if the webbing is torn or frayed, the seat belt must be replaced.

Fig. 13-14 SEAT/SHOULDER BELT

## 13.13 FRESH WATER TOILET

The toilet in your motorhome is very much like the one in your home except that it uses a much smaller amount of water for flushing. When the levers are moved to the right for flushing, a high velocity stream of water produces a swirl effect that should effectively cleanse the toilet. If you wish, a deodorizing agent may be used to eliminate any odors from the toilet.

1. Flushing the toilet:
   a. Push both levers to the right and hold open during the flush.
   b. Release the levers. A small amount of water should remain in the bowl.
   c. If you wish to add more water to the bowl, push the small lever to the right and hold until you have the desired level of water.

For additional information and instruction, see the manufacturer's toilet manual.


Fig. 13-15 TOILET

2. Operating Tips:
   a. Do not use facial tissue or regular household toilet tissue in the RV toilet. It will not disintegrate properly and will cling to the sides and bottom of the holding tank making it hard to clean. Use only toilet tissue available at your RV center designed for use in RV toilets.

b. Do not flush sanitary napkins or other non dissolving items down the toilet.
c. Do not use automotive anti-freeze or caustic chemicals such as household bleach in the toilet or holding tank. These can damage plastic or rubber parts in the system.

2. Cleaning the Toilet:
The toilet should be cleaned regularly for sanitation and efficient operation.
   a. Clean the toilet using a mild bathroom cleaner. Do not use caustic or abrasive cleansers. Do not allow cleaners to remain in the toilet bowl for any length of time. Plastic surfaces and seals could be damaged.
   b. Dump and rinse the holding tank after cleaning and flushing the toilet.
   c. Add a bit of odor control chemical every few days to eliminate any possibility of odor in the bathroom.
   d. If the operation of the flush valve becomes stiff, it may be lubricated with silicone spray. Turn off the water pump, drain all the water from the toilet bowl and spray silicone lubricant inside the flush valve. Operate the valve several times to make sure it is operating freely.

For instructions on preparing the toilet for cold weather storage, refer to the section on winterizing.

## 13.14 OPTIONAL ELECTRIC STEP (XL ONLY)

Normal Operation - Step switch in "on" position (located on switch panel beside door entrance). Open the door. The step should descend and lock in extended position with the understep light on. Close the door. The step should retract and lock in up position.

1. Step Locked in Down Position:
Open the door and allow step to descend. Flip switch to off. The step should remain in down position with the understep light off when the door is closed.

2. Step Locked in Up Position:
Flip switch off while door is closed and step is locked in up position.

Fig. 13-16 STEP

3. Ignition Safety System:
When the ignition switch is turned on, step will activate with door movement, regardless of door switch position.

Periodic maintenance including lubrication and cleaning are necessary to keep the step functioning properly.

See manufacturer's manual for operating instructions.

## 13.15 SCREEN WINDOWS

The screen windows have been designed so that the screen may be removed. To remove the screen, push it up and pull it.

Fig. 13-17 SCREEN WINDOWS

## 13.16 STANDARD QUARTZ CLOCK

See the instruction manual in your information packet.

Fig. 13-18 QUARTZ CLOCK

## 13.17 POWER ROOF VENT (OPTIONAL)

Your motorhome may be equipped with optional power roof vents. These are designed to move a lot of fresh air through your motorhome and reduce the need for air conditioning under many circumstances. The vent dome can be raised or lowered using the crank handle. A push button switch turns the fan on or off.

Fig. 13-19 ROOF VENT

## 13.18 SUSPENSION AIR SYSTEM (OPTIONAL)

Your motorhome is equipped with an air assist suspension system that can be pressurized to provide the desired stiffness. Use an air hose and accurate pressure gauge to pressurize the system. A valve stem is located on each side of the motorhome next to the wheel well. Never operate at less than 20 psi or more than 100 psi. A good pressure is 50 psi for starters, a higher pressure gives a stiffer system.

Fig. 13-20 VALVE STEM (TYPICAL)

# 14 CARE AND MAINTENANCE

## 14.1 EXTERIOR

1. Roof:
   The roof is made with aluminium rafters and constructed in a laminated sandwich method that will withstand a certain amount of weight. It is strong enough to support the weight of an average adult should it become necessary to repair the roof or any of the roof mounted components. It is not recommended to carry large heavy objects on the roof. The additional strain of the weight along with the movement of the vehicle could cause damage to the roof. Check the roof regularly, especially the sealant around vents, air conditioners, body-to-roof seams, etc. for possible leaks. Any suspected leaks should be repaired immediately. Any leakage could result in damage to the interior of the motorhome.

2. Underbody:
   Mud and dirt along with corrosive materials used to control dust or ice on the roads can accumulate underneath your motorhome and cause premature deterioration and rusting. In addition, any build-up will add unnecessary weight to the vehicle. It is recommended that the undercarriage and the entire underbody be rinsed and flushed every time the motorhome is washed.

3. Washing, Waxing and Polishing:
   Damaging salts, calcium chloride, road tar, tree sap, insects and other foreign material have a way of accumulating on the body of your motorhome. To reduce the harmful effects of these agents it is recommended that the motorhome be washed frequently and thoroughly using a mild soap and warm water. Do not wash the exterior in direct sunlight and never use hot water. Pressure washers are not a good idea as they can loosen decals and sealants. Waxing your R.V. is strongly recommended to counter the effect of U.V. exposure on the exterior fiberglass parts.

   Carefully inspect all caulking around windows, doors, and vents as well as all other joints. Recaulk if necessary using the correct caulking material from your Triple E RV dealer.

   CAUTION
   Never use strong solvents or harsh abrasives on painted surfaces.

   If you notice the water failing to bead on the motorhome it is probable time to wax and polish it. This will not only improve the appearance of your motorhome, but will protect the painted surfaces from oxidation and corrosion and make it easier to wash.

4. Stripes and Decals:
   A few hints and precautions on care and maintenance:
   a. Wash with plain soap and warm water. Rinse thoroughly.
   b. Never wash with high-pressure washer at close range. The force of the water can lift the edges of the decals.
   c. Do not use solvents. They can smear the colors and damage the adhesive.
   d. Never use lacquer thinner or paint on decals.
   e. Avoid splashing gasoline or diesel fuel on decals and stripes. Rinse immediately if it happens.

5. Exterior Lighting:
   Before each trip, inspect all clearance lights, identification lights, marker lights, stop lights, turn signal lights and backup lights. Replace burned-out bulbs immediately. Keep all light lenses clean with soap and water.

## 14.2 INTERIOR

Accumulations of dirt and dust not only detract from the appearance of the interior of your motorhome but will shorten the life of the carpets and fabrics. Weekly cleaning and vacuuming is recommended.

1. Carpets:
   See the manufacturer's carpet care guide on how to clean soil, dirt and stains from the carpet.

2. Upholstery:
   Care should be taken when cleaning upholstery materials in your motorhome. Do not use just any cleaner or spot remover. Regular vacuuming and wiping with clear water will take care of most stains. Any major cleaning problems should be undertaken by professional cleaners.

IMPORTANT

Direct sunlight will cause fading of upholstery and fabrics. To minimize the effect, close drapes, blinds and shades whenever possible.

3. Spots and Stains:
   Most spots and stains can be removed by using clear warm water. To keep the stain from spreading, start from the outside of the stain and work toward the center.

   Stains such as lipstick, grease, ink or mustard are very hard to remove and will probable require some professional advice or help.

4. Vinyl Fabrics:
   Vinyl should be cleaned with a soft, damp cloth using a mild detergent. Never use solvents of any kind on vinyl surfaces.

5. Velvets:
   Come with fire rating cleaning code "S". Cushion covers should not be removed and dry cleaned. Stain guard protected.

   CLEANING CODE "S"

CAUTION

Use of water-based and detergent-based solvent cleaners may cause excessive shrinking. Water stains may become permanent and unable to be removed with solvent cleaning agents.

6. Draperies, Curtains and Bedspreads:
   These are made from a variety of fabrics and will require the help of professional cleaners. It should be noted that most materials will probably shrink by about five percent even when cleaned professionally.

7. Cabinetry:
   Only the finest wood products have been used in the construction of your motorhome. To clean, use a soft cloth and a high quality wood finish cleaning product available from your Triple E dealer or other RV centers.

   The beauty of the wood is in the natural variations in grain and density causing some differences in color and shading.

8. Walls:
   As a rule, walls can be cleaned easily using warm water and a mild soap. For easier cleaning of accumulated grime, a bit of rubbing alcohol may be added to the water. Never use solvents or abrasives.

9. Tables and Countertops:
   The plastic laminate on work surfaces will resist solvents, stains and abrasions. A coat of furniture wax will help preserve their beauty and make cleaning easier.

10. Sinks:
    The acrylic sinks can be cleaned with warm water and soap. Wipe dry to avoid streaks. For stubborn stains, a mild abrasive may be necessary. Always work in the direction of the polish lines.

11. Refrigerator:
    The cabinet interior should be cleaned regularly. Remove shelves and wash the lining with lukewarm water to which a mild soap may be added. Dry thoroughly, especially around door frame and door gasket. Warm water only should be used to wash the cooling evaporator, ice trays and shelves. Never use strong chemicals or abrasive cleaning materials on any part of the cabinet. See manufacturer's information.

12. Power Range Hood:
    The filter on your power range hood should be removed, washed with detergent and hot water, rinsed and replaced after each trip. Before replacing the filter, wash the grease and collected dust from the inside hood surfaces with a damp cloth.

13. Range/Oven (option):
    a. General:
       Regular cleaning with a warm detergent solution and soft cloth will keep your range looking bright and new. This should be done as soon as range cools.
    b. Oven Interior:
       Clean as soon as possible after use when the oven is cool. Grease spatters that are allowed to become hard and baked on become very difficult to remove. Care must be taken to avoid bending the thermal sensing element, which could cause a variation between the oven temperature and the dial setting. If oven cleaners are used, protect aluminum gas tubing, thermostat sensing element and electrical components from the cleaners. Thoroughly rinse oven with a solution of one tablespoon vinegar to one cup of water and wipe dry.
    c. Top Burners:
       Top burners (caps and grates) may be cleaned with a detergent solution. If any burner port should become clogged, clean with a toothpick. Never use pins or other metal objects to clean the ports, as they may become enlarged. If the burner is washed in a sink, dry immediately by shaking off all excess water and lighting the burner until all water has evaporated.

14. Microwave Oven:
    Consult owners manuals for detailed instructions. Keep the door and inside of your microwave oven clean. No grease, soil or spatter should be allowed to build up. A build up of soil will absorb microwave energy, just the same as the food you are cooking and may increase the cooking time.
    a. When food spatters or spilled liquids adhere to walls, wipe with a damp cloth. Mild detergents may be used if the oven gets very dirty. The use of harsh detergents or abrasives is not recommended.
    b. The outside oven surface should be cleaned with soap and water, rinsed and dried with a soft cloth. To prevent damage to the operating parts inside the oven, water should not be allowed to seep into the ventilation openings.
    c. If the control panel becomes wet, clean with a soft, dry cloth. Do not use harsh detergents or abrasives on control panel. When cleaning the control panel, leave the oven door open to prevent oven from accidentally turning on. After cleaning touch cancel pad to clear display window.
    d. It is necessary to remove the glass tray for cleaning. Wash the tray in warm sudsy water or in a dishwasher.
    e. The roller ring and oven cavity floor should be cleaned regularly to avoid excessive noise. Simply wipe the bottom surface of the oven with mild detergent water or window cleaner and dry. The roller ring may be washed in mild sudsy water or dishwasher. Cooking vapors collect during repeated use but in no way affect the bottom surface on roller ring wheels. When removing the roller ring from cavity floor for cleaning, be sure to replace it in the proper position.

15. Bathroom:
    a. General:
       As a general rule, use warm water and mild soap to clean walls and surfaces in your bathroom. On glass doors and mirrors a good quality glass cleaner may be used. Harsh cleaners, detergents or abrasives should never be used.
    b. Shower Compartment:
       Use a non-abrasive cleaner to clean your shower compartment. Do not use highly concentrated or high acid contact household cleaners, as these may damage the shower compartment.
    c. Toilet:
       For instructions on the care of the toilet, refer to the toilet manufacturer's manual.

16. Doors and Windows:
    Door locks and hinges should be lubricated periodically with powdered graphite to keep them operating easily and to protect against freeze-up.

    Windows should be cleaned using a good glass cleaner. When cleaning ice from windows always use a plastic scraper and avoid damaging the seals and sealant along the edge of the windows.

# 15 MOTORHOME MAINTENANCE

## 15.1 CHASSIS CUSTOMER SERVICE

Chassis service is a concern for every vehicle owner. Ford Motor Company has recognized this and has developed a nationwide network of Ford Service Centers. Each service center has the facilities, technicians, equipment and part availability to properly service your motorhome chassis.

If you need immediate service and a Ford Service Center is not nearby, a Ford-based Service Representative is available to assist you by calling:

Ford US 1-800-392-3673
Ford Can 1-800-565-3673

## 15.2 ENGINE ACCESS

There are two means of access to the engine:

1. Front vehicle hood.
2. Under console between driver and passenger seats.

### 15.2.1 ENGINE HOOD

Unlatch and raise hood to access engine. With the hood open you can access the following:

1. Engine Oil Dipstick
2. Engine Oil Filler Pipe
3. Power Steering Reservoir
4. Park Brake Fluid Reservoir
5. Radiator Cap
6. Engine Coolant Overflow Tank
7. Transmission Dipstick and Fill Tube
8. Air Filter Restriction Indicator
9. Block Heater Cord

Fig. 15-1 ENGINE HOOD

## 15.3 ENGINE COOLING SYSTEM

Refer to the chassis manufacturer's manual for complete information and instructions on checking, filling and servicing the fluid level.

CAUTION

If your motorhome is equipped with an auxiliary rear heater and a motor aid water heater, be sure to allow for adequate coolant capacity.

## 15.4 AC AND OIL COOLERS

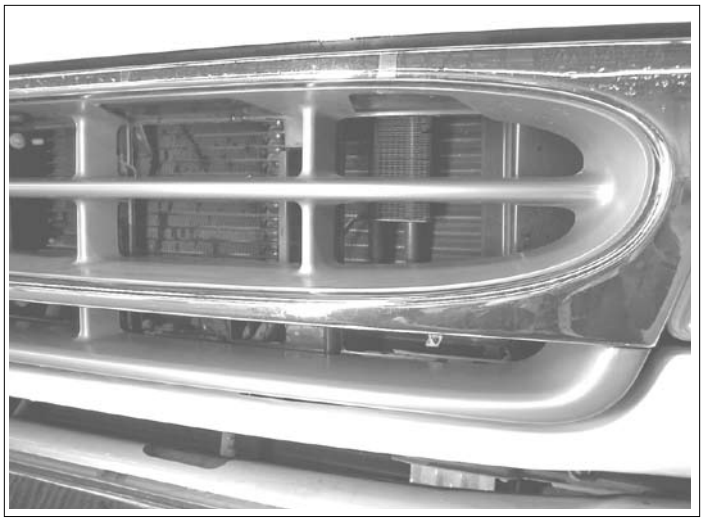


Fig. 15-2 COOLERS

Cooling capacity is provided at the front of the vehicle for the oil coolers and air conditioner condensers. Keep all the coolers clean. Access them by opening the front hood. Keep the cooler and A/C condensor fins clear and free from debris like bugs, for maximum cooling efficiency.

## 15.5 TIRES

Make sure to keep tires at the proper level of inflation. Low pressure will cause poor handling as well as exceptional wear and tear on the tires.

CAUTION

When replacing tires make sure to select tires of the same size and ply rating as the ones installed as original equipment.

See the vehicle certification label for information on recommended tires.

# 16 STORING YOUR RV

All systems, components and appliances should be inspected and repaired prior to storage.

Checklist:

1. Fill fuel tanks to reduce excessive build-up of moisture in the fuel tanks.

2. Check coolant level and add anti-freeze if required, to protect to the lowest expected temperature during storage.

3. Change engine oil to the recommended viscosity to aid cold weather starting.

4. Park motorhome as level as possible, end to end and side to side.

5. Ensure that battery has a full charge, then disconnect both the main and auxiliary batteries via the battery disconnect switch. (optional) Charge monthly.

6. Wash motorhome. If exposed to road salts, the exterior and underside should be thoroughly washed and flushed.

7. Remove all perishables and anything which may freeze (canned goods, medicine, etc.). Leave the refrigerator door open. Be sure controls are turned off.

8. To ventilate living area, open drawers, cabinets, closets, etc..

9. Drain the holding tanks, toilet and living area water system. Deodorize and allow to dry. Turn off the water heater. Drain fresh water tank and water heater. Winterize (to store) water system as detailed in Water System Winterization on page 17-2.

10. Remove water filter and put inside where it will not freeze.

11. Turn off LP gas tank valve.

12. Make sure furnace manual valve and thermostat are set at off, range/oven burners at off, fridge and oven at off.

13. Add RV anti-freeze (1/2 cup each) to the kitchen, bathroom and shower drains.

14. Check engine transmission and motor generator (if equipped) for evidence of oil leaks.

15. Before moving, run engine at least two minutes with the transmission selector in park position.

# 17 WINTERIZATION

CAUTION

In northern climates, during the winter season, winter diesel must be used to prevent fuel gelling. Gelling could cause the engine to stop or make it difficult to start.

## 17.1 COLD TEMPERATURE OPERATION

All XL motorhomes are built for three season travel including:

1. Urethane installation undercoating.
2. Insulated and heated holding tank compartment (XL only).
3. All plumbing located in heated interior spaces.

Although your motorhome is designed to withstand winter temperatures, we cannot guarantee the vehicle not to freeze. Certain precautions should be taken in preparing for sub-zero temperature travelling.

### 17.1.1 CHASSIS

Check coolant level and add anti-freeze, if required, to protect against lowest expected temperature. Change engine oil to the recommended viscosity to aid cold weather starting. See the manufacturer's manual for further recommendations.

### 17.1.2 LP GAS

When travelling in winter, propane is recommended as it will vaporize in extreme cold (above -42 C). Butane is not recommended due to its high vaporization temperature (0°C). Use of butane in cold temperatures may block the system and cause components to malfunction. Add approximately .25 liters of methyl alcohol to your LP gas container to prevent freeze-up.

### 17.1.3 FURNACE

During below freezing temperatures, the furnace must be operating at all times. Remember, although the furnace runs on LP gas, it is powered by 12-volt electrical. the battery in the motorhome must be up to normal levels, 12 volts or else the furnace will not operate.

### 17.1.4 WASTE SYSTEM

To prevent winter freeze-up, add regular RV anti-freeze through the toilet and kitchen drains, directly into the holding tanks. Be sure to add sufffficient amounts in order to protect the total volume of the holding tank.

Do not use alcohol-based anti-freeze or other petroleum products.

### 17.1.5 FRESH WATER SYSTEM

The fresh water system consists of the water tank, the pump and all lines. This entire system is contained inside heated interior spaces. In cold weather, it is necessary to have the furnace operating. The heated air in the motorhome will circulate around the water tank, pump and water pipes and reduce the possibility of freeze-up.

# 17.2 COLD TEMPERATURE STORAGE

## 17.2.1 WATER SYSTEM WINTERIZATION

1. Fill the water tank and lines with potable water anti-freeze. Do not use automotive coolant anti-freeze, as this is toxic, and will contaminate the water system.
2. Add antifreeze to tank then drain the fresh water tank via the drain in the drain compartment.
3. Turn off the water pump.
4. Drain the water heater using the drain/relief valve located at the water heater.
5. Hot water tank bypass valve to the bypass position.
6. Turn on the pump.
7. Open the hot water faucet furthest from the pump. Do this on all faucets, hot and cold. Do not forget the toilet and shower and exterior shower. When red anti-freeze appears let about a cup run down the drain, this will winterize the trap.
8. Turn off the pump.
9. At the city water connection, open the dust cap and press the valve inside the inlet with a small screw driver until anit-freeze starts to flow. This will ensure frost protection for the inlet pipe.

Fig. 17-1 BYPASS VALVE

3. Turn on the pump.
4. Open the water faucet furthest away from the water tank. Run the water until clear water appears. Shut off the faucet, and do this to all faucet, and shower head.
5. Open the hot water line until water appears.

CAUTION

NOTE: Do not turn the water heater bypass valve to the normal position until clear water appears at all faucets.

## 17.2.2 DE-WINTERIZE WATER SYSTEMS

1. Fill the water tank with clean water.
2. Turn the winterization valve in the utility module to the normal position.

**WARNING**

Never use automotive type anit-freeze in fresh water sytem. These are highly toxic.

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